

AND HOME COMPANION.

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OUR HEALTH DEPARTMENT

The Economy of Rubbers.

Rubbers are prodigious money savers-in two ways; they save shoe leather and doctors' bills. The best shoes in the world soon crack and go to pieces if you wear them in the rain and snow and slush. A pair of \$3 shoes with rubbers will outwear a pair of \$12 shoes without rubbers. And as for doctors' bills, a 50-cent pair of rubbers would have saved many a hundred-dollar doctor's bill, to say nothing of the discomfort of being sick and the danger of pneumonia or consumption or grip. -The Churchman.

The Cause and Cure of Rheumatism.

Unquestionably, the most active cause of rheumatism, as well as of migraine, sick headache. Bright's disease, neurasthenia, and a number of other kindred diseases, is the general use of flesh food, tea and coffee, and alcoholic liquors. As regards remedies, there are no medicinal gents which are of any permanent value the treatment of chronic rheumatism. The disease can be remedied only by regimen,-that is, by diet and training. simple dietary, consisting of fruits, grains and nuts, and particularly the free use of fruits, must be placed in the first rank among the radical curative measures. Water, if taken in abundance, is also a neans of washing out the accumulated

An individual afflicted with rheumatism in any form should live, as far as possible, an out-of-door life, taking daily a sufficient amount of exercise to induce vigorous perspiration.

The Apple as Medicine.

The apple is such a common fruit that ew persons are familiar with its remarkmedicinal properties. Everybody ought to know that the very best thing he can do is to eat apples just before going to The apple is excellent brain food, because it has more phosphoric acid, in easily digestible shape, than any other fruit known. It excites the action of the liver, promotes sound and healthy sleep and thoroughly disinfects the mouth. It also agglutinates the surplus acids of the

bonach, helps the kidney secretion and events calculus growth, while it obviates the cross that is one of the best prevences of diseases of the throat. Next to on and orange, it is also the best antidote for the thirst and craving of persons addicted to the alcohol and opium habit. The Humanitarian.

The Food Value of Fruits

It is not necessary to repeat here what every intelligent person ought to know, namely, that fruit possesses very little food value. It is only refreshing. When preserved or stewed with sugar, however, it furnishes considerable sugar, which is an excellent and necessary part of the winter diet, but there are no nourishing qualities to be found in it. The value of the grape cures and various other fruit cures consists, it is said by those who are authority in the matter, on the rest and complete leaning out of the system from the oversupply of foods which have been taken before. In the "grape cure" and most of the fruit cures a great deal of water is drunk The entire system is thus washed out and also given a rest from food except the simple diet of grapes. It seems to be the general opinion of the best physicians that the majority of people who live above want take more food than is good for them. whence the success of all cures where the amount of food is restricted. The oldfashioned idea prevailed that men or women who had passed their youth needed some stimulus of meat and other strong foods. The opposite theory is now advocated, and less food is recommended for a person in middle age than in youth, when the body has not yet reached its maximum powers. The various diseases of the kid neys and other organs which assist to carry off the wastes of the body are said to arise from excess of food as well as stimulants of all kinds .- N. Y. Tribune.

Fruit Promise in Nebraska.

March 4, 1899.

Editor Green's Fruit Grower: During the month of February the thermometer marked an unusually low range of temperature for Nebraska and for a onger period than usual. In the eastern part of the State the thermometer marked 25 to 30 degrees below zero and in the western part 35 to 41 degrees was reported. Naturally there has been considerable inquiry as to the present condition of orchards in the State.

A very careful examination of our orchards here in Saline County indicates that apple orchards, where reasonably well cared for, are in excellent condition and apparently have suffered very little from he cold wave. During the past season they have set rather more than the usual unt of fruit buds which are in excelent condition, and nearly all the apple ees seem to be in vigorous and healthy condition. It is true that with some valeties the wood of the new growth is slightly discolored, but a slight discoloration of the wood of the new growth of ome varieties has not heretofore indicated ny serious harm. As a rule, wherever rehards have been harmed, the growth the previous season not being as well tured as the older growth. None of the wood in our orchards is worse than in revieus years and we regard the condition f the trees as considerably above the

An examination of pear wood this mornng, March 4th, indicates that the wood the Kieffer is quite badly discolored; is wood of the dwarf pear also discolored t not so much. Have not been able yet examine all varieties, but so far as cut the wood of the Warner is in altosether the best condition of any. This variety came from Ohio ten years ago, ent by a Quaker lady, and so far seems Orange Judd Farmer

to be the hardiest and also freest from blight of any pear experimented with. Pre-vious experience indicates that discoloration of wood does not mean the death of the tree. Usually the bark and buds have sufficient vitality to carry the sap, and with favorable seasons the tree recovers.

A careful examination of the cherry orchards this week indicates that all varieties of the hardiest sour cherries are excellent condition, better condition than usual, and at this time we see no reason why there should not be a full crop of

Concerning peach trees. In some orchards peach trees which were set during the season of '98 show less damage than trees planted a year or two before, for the reason that a tree that has just been planted does not make so rank and vigorous a growth as an older tree, does not grow as late in the fail, and is ofttimes not in such a condition of unripeness when winter sets in as to suffer from cold waves. Peach buds are doubtless destroyed over the major portion of the State. Careful examination of some of the hardiest varieties this morning indicates that there are yet a few live buds. Peach trees, however, are apparently in fair condition. Wherever the trees have been damaged they should be cut back to comparatively sound wood. The best time to do this is during the opening spring when the sap is commencing to move, and by the starting of the buds it is easy to sec to what point to cut back the peach tree. In some cases it may be only the twigs of the last season's growth, and with other trees, particularly with varieties of not the greatest hardihood, it may be neces-sary to cut back nearly to the ground or the trunk of the tree or into the principal limbs, using fair judgment and observation to determine.

It will readily be seen that as these periodical waves of extreme cold are from ten to twelve years apart the time to plant freely of peach trees is immediately following one of our coldest waves, then there is a fair prospect of the trees coming into bearing within three or four years and they will have time to mature a number of crops before the next periodic

cold wave. Concerning the vineyards. Vineyards which have received proper care in Saline County, meaning to cut the vines loose from the wire trellis in November, to prune them at that time, to drop the vines upon the ground, to cover with straw or hay and over this a little earth to keep the covering from blowing away, such vineyards we believe to be in good condition, and even where this has not been done we think that the major portion of the hardiest vines will be found in fair condition. Our experience in previous years has been that while some varieties would endure the cold and drying winds of ordinary winters, the increased safety and productiveness of vineyards that were protected over winter justified the moderate expense of careful protection. This expense should not exceed \$5.00 per acre.

Strawberry plantations are no doubt all right all over the State, particularly where protected by a winter mulch which should prevent the heaving up sometimes, resulting from continuous freezing and thawing where winters are comparatively free from snow.

On the whole, the outlook for fruit for Nebraska for '99 is very favorable .- E. F. Stephens, Nebraska.

About Thinning Fruit.

A small, insipid, worthless peach is sure to be the result when this system is not practised, in instances where the trees are overloaded. The product is wanted by no one, and rarely will sell for sufficient to pay the cost of marketing. From an econmic stand-point it does not pay.

The rule I have adopted is to thin the fruit so as to leave that remaining about six inches apart on the limbs. I have found the same rule to work equally well when applied to apples and pears, particularly if the former are to find their way on to the city fruitstands. Four dollars per barrel was received for apples in October last thus treated, that would not have urned the scales at two dollars, if left untouched. Mr. John Craig and Prof. Waugh, of Vermont, saw this fruit when being packed for shipment, and could scarcely recognize the variety, as they had seen it grown in other sections.

One-half of the crop of an extremely heavy setting of Kieffer pears was removed and allowed to go to waste on the ground. The portion that matured was fine and sold at high prices, and in my opinion gave a larger yield than if all had remained on the trees.

Many canning factories in purchasing the apples and pears consumed, demand that no fruit delivered them shall run under a specified diameter. They are important factors in the consumption of our surplus fruits; hence their requirement is an additional argument in favor of the work suggested that deserves more general consideration at the hands of all growers of fruit.-Correspondence Country

Underdraining the Orchard.

Locate drains midway between the rows of trees. The depth of the drains should be from four to five feet, not less than four and as much deeper as the outlet and convenience will allow. The tile should be two or three sizes larger than would be necessary to use in ordinary land draining, to give aeration to the soil, and not be liable to obstructions from small roots. If the drains midway between the rows and as much as four feet and laid with five or six-inch tile, the roots of the trees will not likely reach the drains in sufficient numbers to seriously affect the drainage. The deeper the drains the deeper the roots will penetrate the subsoil. If the drains were eight feet deep the earth midway between the drains and directly under the rows of trees would be affected as deep as seven feet in a few years' time, and the roots of the trees will penetrate as deep as the subsoil is drained within a reasonable limit, say ten feet, possibly more. Trees so deeply rooted are the better secured against injury from the extremes of the weather. With the sufficient under drainage of a fertile, retentive clay soil, the intelligent orchardist with persistent energy is master of the business.-Correspondence

Why not this Way of Filling Ice House ?

A Western farmer has an ingenious and easy way of accumulating his supply of ice for the summer. There is a spring on his farm, and when the weather is cold enough he simply lets the water into a large box-like inclosure where it freezes, an addition being made to the supply by the freezing of successive shallow layers of water. When the whole inclosure is filled with solid ice, he protects it properly, and there is his ice house. The chopping out he will do in hot weather.

Loudon in Illinois Hardy.

J. L. Hartwell, Lee County, Illinois-Blackberries and red raspberries that are in any way tender are killed. My impression is that Japanese plums are hurt. Strawberries that are covered are all right. Those that were not covered are probably damaged. I do not think that cherries are hurt. Some varieties of apples are hurt, even if the trees are not killed. This will be a test of tender va-rieties all round. I fear Columbian raspberries are killed to the ground. I do not think that Loudon Red raspberries are killed back at all .- Farm, Field and Fire

Orchard Manuring.

So much mischief can be done by apply ing manures of the wrong kind in orchards that I doubt if we do not lose more by manuring than by neglecting to manure. Fruit trees do not require at any time barnyard manures, or their equivaent. What they require is a supply of inorganic food. You can do no better for apple trees than to supply them with coal ashes in which there is a liberal admixture of wood ashes. The coal ashes loosen the soil: the wood ashes furnish the fertilizer. If you can get a supply of old mortar you have just the thing you need. A mixture of lime and salt, when so mixed as to leave no free salt, is excellent for all fruit trees. All such manures should be applied as a top-dressing. A peach or plum orchard needs nothing better than swamp muck or earth from the woods, with a slight addition of phosphate and potash.

If barnyard manure is applied at any time, it should be thoroughly decomposed and applied as a top-dressing. Such manure, if placed about the roots, when planting a pear or apple tree, will kill it. Grapes of course want phosphates and potash. They will also respond to a free application of liquid manures during their periods of rest, both in winter and in mid-summer. All the tall growing berries, of the bramble sort, will use a large unt of organic manure. But be care ful about dressing your raspberries with rank undecomposed barnyard manure. The probability is at any time you will develop fungoid disease that you cannot easily master. If you use barnyard manure in raspberries it should be thoroughly comminuted with the soil as a compost. In fact, I prefer to compost every manure before it is placed on my gardens. Equally in portant as the manure is the mulching of our fruit trees and bushes of all sorts. -E P. Powell, in Orange Judd Farmer.

Practical Methods in Growing Grapes and Other Small Fruits.

Experience has taught me that labor expended in preparation of the soil before planting pays best, therefore I would grow some hoed crop upon the soil before planting trees or vines, unless I had a clover sod to use for the purpose, which furnishes the best foundation for plant growth, the roots of the plant loosening and aerating the soil, and storing up the very elements needed at this time.

In our section we plant vines in rows nine feet apart, and ten feet apart in the row for free growing kinds, such as the Concord, Worden, Moore Early and Niagara. Varieties like the Delaware and Green Mountain can be planted 8 x 8. Care should be taken to secure vigorous well grown vines, preferably two years old, clean and free from mildew or fungus, Mark the ground ten feet apart the opposite way from what you want the rows to run, then with a two-horse plow mark the rows for planting nine feet apart, going twice in a row and plowing as deep as you can (presuming that the land has been deeply and thoroughly plowed previously) so that in setting the vine it can have some loose soil under it, and I want to set the vine at least six inches deep so that the after cultivation will not disturb the roots, and a dirt mulch of three or four inches can be kept over the roots to conserve the moisture.

Before planting the vine trim off all superfluous wood, and leave only three or four buds to grow. As some hoed crop is supposed to be raised the first year (but never a sowed crop) it is well to stake the vines to prevent injury, and if vigorous growth is made it can be tied to the stake. The vine is now left until winter, usuall February, when the strongest cane is tied to the stake, all side shoots cut off, and top shortened to five and a half or six feet. All other canes are cut close to the vines and all shoots that start from them broken off. If any fruit should set the second year it is best to remove it and let the strength of the vine go to the production of wood. In the fall of the second season or the spring of the third season we set the posts in the rows leaving two vines between posts. Brace the end posts, and put two wires on them, one three feet from the ground and the other five and a half or six feet. We use No. 11 wire.

Third Year. Now trim your vine if it has grown enough so that you can do it. leaving one arm on each side of the head vine. Cut these arms back to six buds each and tie to the wires. Train the shoots along the wires and tie. Let but few, not over ten, clusters of fruit remain on the vine.

Fourth Year. Select the best cane nearest the head of the vine for your bearing cane. Cut off all wood beyond it. Trim hese bearing canes and cut off the ends, leaving ten buds. Fifth Year. Select the best cane near

the coming season, and leave twelve buds on each bearing cane. Cut off all wood beyond these bearing canes. Tie these long bearing canes to the upper wire. If there is not sufficient room for future growth carry alternate canes down to the lower wires and tie in umbrella form. After the fruit is set these vin 's should

receive their summer pruning, which consists of removing the tendrils or clingers and cutting off the ends of the bearing canes at third or fourth leaf beyond the fruit, excepting only the cane nearest the head of the vine which is not shortened, but left to grow for the bearing cane for the following year .- Strawberry Culturist.

About Ordering Trees and Plants from Nurseries.

Those who have not already sent in their orders to nurseries for such plants, vines and trees as they are intending to plant the coming spring, should lose no ime in sending in their order.

Most people who desire to purchase do not think of sending in their order until the time has approached when the items are needed. You should remember that the nursery business must be done in a few short weeks, and that nurserymen have orders that have been seat in advance, and that usually the nyrserymen cannot fill your order the moment it is re-

There are few lines of business more exasperating than the nursery business, owing to the fact that the business of the entire year must be done during a few weeks of fickle weather in early spring, when frost may prevent digging, or shipping, and when rain or snow storms may prevent outdoor work. No one can tell what the seasons may be. The season may be late with continued freezing and stormy weather, or the season may be short, summer coming in with a bound.

The overworked nurseryman during the spring digging, shipping and packing season, is not to be envied. He is nearly always worked far beyond his strength, and is driven to his wits end to know how to serve all of his patrons at the same moment, and serve them well.

You who propose ordering trees, etc.,

can assist the nurseryman by sending in your order as early as possible. We do not mean by this that it is impossible to have a late order filled, for this is not the case. Nurserymen are glad to receive orders at any time during the packing season, but it greatly aids them in their work dormant so that they can be sent much later than planters usually suppose. In

Western New York trees from cellars can be planted as late as the first of June with safety. We recommend, however, that they be planted as much earlier as possible. People in southerly latitudes often write nurserymen located further north, that their trees have not arrived, that the season is advanced, and they fear that they will not get their trees in time, etc. Such people usually need have no fears, since their trees are coming from the north, where the buds are retarded, and though the trees in the southerly latitudes are

the north come in a dormant condition and can be safely transplanted. Strawberry plants are among the latest than can be safely planted. Strawberry plants can be transplanted at any time between the opening of spring, and the blossoming of the plants, but the earlier they are planted the more successful generally.

leafed out, or in blossom, the trees from

Our readers may be glad to receive the following point in regard to dealings with nurseries: At about the close of the packing season nearly every large nursery finds itself in possession of a surplus of certain varieties of trees, a larger number having been dug than were required for filling their orders. This surplus stock may usually be purchased late in the season at exceptionally low prices. You could not, however, go to the nursery and expect to find a large assortment of varieties at a late date, but if you are near a large nursery, or can send to such a nursery and order late in the season, offering to take five or ten dollars worth of surplus stock at a special low price, you will get large value for your money, also desirable varieties, but not always such varieties as you might have selected. In this case you would have to depend upon the nursery man to select the varieties for you, and in such case would have to rely upon the integrity of the nurseryman. If you have enough confidence to send him \$5 or \$10, asking him to select for you such pear plum, apple or other items as he has in surplus you would get a bargain .- Editor.

Reply to Mr. Gidon.

Editor Green's Fruit Grower: I am surprised that Mr. Gidon takes the ground that he does in regard to the movement for the protection of the originators of new fruits. It would seem more consistent for him to favor such a law, as it seems to me his interests lie in that direction. I would ask Mr. Gidon if when he has originated a superior new fruit some thief takes cuttings from it and works up a stock and puts it on the market even before he is ready to do so, what will his profits from first sales amount to then, and from his standpoint it would be of no avail to protest against such sales, for all the thief would need to say is, "My dear sir, this is not yours, this is a reproduction; things so often come that way, you know." Mr. G. says such a law will make trouble. Trouble for whom? The thief, of course, and he, of course, would object to the law, as "no rascal ever felt the halter draw with good opinion of the law." Such protection is given to so many things that it would seem that an extended argument in its favor would be unnecessary. Mechanical inventions are protected. Authors are protected by copyrights and I can see no reason why the originator of a new fruit should not be. To protect a name will not cover the ground. The thing itself must be protected or another name will be substituted and no infringethe head of the vine for your bearing cane | ment can be charged .- N. B. White, Mass.

Are You a Llar?

Are you a liar, or have you a liar in the family, or do you know a liar? See the doctor about it. The latest theory about the pernicious habit of saying things that aren't so is that it's a disease. If you're born a liar you can't be cured and it's no use trying to do it, but there's hope for mild cases.

Dr. Thomas P. Welch, a St. Louis student of brain disorders, would treat the man who lies much as he would an insane patient.

"We often hear of people who suddenly develop a propensity for lying that is startling." he said, "A peculiar feature is that the individual has nothing to accomplish and absolutely no excuse for dis-regarding the truth. That man should consult a physician. He should be treated carefully. The base of his trouble is the nerves. Rest and tonic, with good pursing, would restore these, and gradually the brain would become healthy and the affliction disappear.

"Criminal traits in parents are known to descend to children. So with lying. In a girl this may be overcome by the wise counsels of the mother, but I believe a boy who is so afflicted will, in a great majority of cases, be much what his father is.

Dr. Frank B. Saylor suggests hypnotism as a cure. He has the greatest faith in the efficacy of suggestion, and believes that the occult science will eventually convert the born falsifier into a modern George Washington, as far as veracity

"Of all liars," he says, "the morphine fiend is entitled to first place. It seems the first effect of the drug is to destroy all sense of truth. A fiend of the morphine variety is absolutely untrustworthy. The drug kills every bit of veracity that the subject ever had. The most trivial things are made the basis for the most marvelous yarns ever heard. It is not a yearning for the drug; it is the working of a diseased mind."—Cleveland "Plain

Protection for New Fruit Originators.

Written for Green's Fruit Grower by JACOB MOORE. My Dear Peter M. Gidon: I am sorry

bank and myself regarding protection for the originators of new fruits. You say, "Let the originator get his profits from if they can have the orders at the earliest possible moment.

The question is often asked, fiew late will orders be received by nurserymen in the spring, and how late is it safe to send

The the originator get his profits from food in these soils so tearfully lazy that no skill nor energy can make it available, or is it nore likely that our careless methods of tillage do not make available enough plant food for the crop, or is it for lack of moisture to transport the food trees, plants and vines? Our reply is that myself. I judge from what you say that into the plant? And so we have a world nurserymen now have extensive cellars for you sell all the seedling crabs you raise, of questions that can be answered only the storage of trees, where trees are kept good or bad, which, of course, brings you by painstaking investigation. profit, whereas Luther and myself have to burn all the seedlings we raise except the good varieties, which are few. Luther Burbank says, in his open letter to me: "Many times have I named a new fruit or flower and before a stock could be produced some horticultural pirate had either old, well known or inferior variety or stealing the plant and introducing it as their own or offering a big stock as soon as the originator commences to advertise the variety." Does it make no difference to you that others use the names of your varieties to falsely label plants of common varieties in their possession and swindle confiding planters by such means? I thought better of you, Peter. You would not be obliged to litigate in consequence of having the exclusive right to disseminate any production of yours under the name. You could assign your right for a share of the sales to some nurseryman who would protect purchasers of the plants of the variety in order to protect himself in their sale. It would be a great satisfaction to me, and I doubt not to Luther Burbank to give such protection to the people. I understand you to say that you have raised Siberian Crab seedlings supposed to be hybrids, some of which were exactly the same variety. A close resemblance would naturally occur if from self-fertilization, but if from cross-fertilization no two seeds could vary so as to produce exactly the same variety, although there might be a resemblance even then. To assert that you have obtained the same variety from two or more such cross-fertilized seeds is to deny that individual difference is the result of the law of generation. I have raised and fruited thousands of cross-bred seedlings of various kinds of fruit and have never known any two seedlings to be exactly the same variety. I have been told that your method of obtaining crossbred seedlings is to graft a Siberian crab on the limb of your selected variety of the common species surrounded by other branches and leave to the winds and insects the process of cross-fertilization. Then you sow the seeds from the crab apples borne by the graft. This is not the way to do it. Peter, because you get too large a proportion of pure crab seedlings from self-fertilization. You can obtain much better results from one thousand cross-bred seedlings from hand pollination than from the sixty thousand you state you have sent out obtained in the manner I have described. But I assure you that you cannot hoe corn and potatoes or plant beans when the time comes for you to prepare the flowers and apply the polien of the variety you wish to combine with the crab. Your mind must be on that business and nothing else. You must be on the watch and visit the tree every morning, and at noon when the flowers begin to show, to seize the most favorable time to perform the operation. Perhaps when you have followed this plan for years and your productions have cost you a large outlay in time and money it may not seem to you such an absurd idea as it now appears to be to you for the originator to have exclusive right to his

productions. Here is another quotation

from Luther Burbank's open letter to me:

"A plant which has cost thousands of dol-

lars in coin and years of intensest labor

and care, and which is of priceless value

to humanity may now be stolen with per-

fect impunity by any sneaking rascal. Bet-

ter might the banker or jeweler place their

wares around promiscuously on a ten-acre lot than for the originator to possess plants

of value, for he has absolutely no protec-

tion from the law." What becomes of your reliance on first sales of a new va-

you, propagated and distributed silently to members of the trade as your celebrated new seedling, prior to its introduction by yourself? I have known of such instances here at Rochester. You say: "I grow and fruit more seedlings than any one man in the world." Indeed! Are you the champion instead of Luther Burbank, with ais twenty million new creations, eh, Peter? -Jacob Moore.

Tillage and Productivity.

Read before the Western N. Y. Hort. Society by Prof. I. P. Roberts of Cornell University. In looking over the analyses of some soils recently made at the Cornell University Experiment Station, I was struck by some of the facts revealed by the chemist. I found that sixteen soils, excluding those that were phenomenally high, showed an average of 4,587 pounds

of nitrogen, 4,267 pounds of phosphoric acid and 41,600 pounds of potash per acre in the first eight inches of soil, or a total of 50,453 pounds of potential plant food per acre, allowing that an acre of soil containing 121/2 per cent. moisture, eight nches deep, weighs 1,200 tons. Looking down the list a little farther,

saw that a soil from Jefferson County showed 4.07 per cent. of potash. This, computing the soil to weigh as above, would indicate that there was 86,827 pounds or 43.41 tons of potash per acre in eight inches of surface soil and 7,040 pounds of phosphoric acid in the same soil. This soil had a reasonable amount of nitrogen, quite enough to produce abundant crops for many years. Looking down the list still farther, I noticed that a soil from Wayne County analyzed 2.75 per cent. of nitrogen. Using the same computation as above, this would show 58,667 pounds of potential nitrogen per On a few of the soils referred to in the

first paragraph, not more than ten tons of sugar beets were raised per acre, and the potatoes on the adjoining land, which was supposed to be of equal fertility, gave not more than 130 bushels per acre. (See C. U. Bulletin No. 156 and Bulletin No. ——, February, '99, on sugar beets.)
These facts led me to thinking most seriously and to ask many questions which it will be difficult for us to answer.

First, why should a soil containing such vast quantities of plant food, some of it as rich in nitrogen and potash as many to see that you differ from Luther Burcommercial fertilizers sold on the market, produce such meager results? Is the plant food in these soils so fearfully lazy that no skill nor energy can make it available, for lack of moisture to transport the food

It was found that the soi! which con tained more than forty-three tons of potash per acre in the first eight inches was benefited by the application of 200 pounds of muriate of potash per acre. The average increase of potatoes on five plats due to the potash was 40 bushels, while appropriated the name, using it on some both nitrogen and phosphoric acid apparently diminished the yield. Here is a soil overloaded with potential potash and yet responds to an application of muriate of potash. Would there have been enough available potash for the potatoes had better tillage been given? This question can be answered only by the farmer. A man near Medina writes, "I am engaged in raising potatoes and have been much benefited by the reports of your experiments as I find I can nearly double my crop by extra tillage."

The gold seekers traveled hundreds of weary miles over the arid plains to reach Pike's Peak and then camped in their poverty and rags upon the very mines which, in recent years, have produced hundreds of thousands of dollars of the yellow and white metals. They could not see; they did not know how to smite the rock, and so they moved on for a time and then returned to till the land which also contained a mine of wealth which they had not the knowledge or the skill or the energy to secure. It was not the fault of the gold that it did not leap from the earth and pass into circulation and do its legitimate work, but the fault of those who camped just above it, and so in like manner these gold seekers, when they returned, lived upon the land which contained in the despised earth untold wealth It was not the fault of the nitrogen, phosphoric acid or potash that it did not get to circulating in the channels of trade in various forms of use and beauty, but the fault of the men who resided on the farm. Now the question comes, are we as blind

and as ignorant as were those who camped on the plateau in sight of Pike's Peak? Shall we like them, leave the mine to be worked by those who are more persevering or more intelligent, or shall the unused energy in the soil which awaits the husbandman who is able to discover it and to direct it into legitimate channels be utilized?

Some of the soil at the base of Pike's Peak was not "pay dirt." There was not enough gold in it to justify the laborious work of washing it. In like manner some of the soil, even in New York, is not worthy of the efforts of the intelligent husbandman. It should, like the undesirable mine, be abandoned. The time may come when science and art will so cheapen effort as to admit of working these abandoned mines and fields.

But what shall be done with the agricultural mine which would pay large dividends if only a moderate amount of knowledge and skill were applied? Who can diagnose the case? Why such meager average rewards? Is it because agriculture is the most difficult occupation? Is because the occupation of the farmer has more vicissitudes than any other calling? Is it because, as a class, we have not during the last five thousand years had any training in our calling save during the last quarter of a century? It appears to me that all of these factors enter

into the problem.

It has been shown beyond a preadventure that the soil contains vast quantities of unused plant food. It has also been shown, over and over again by experiments, that superior tillage served to unlock enough food to furnish plants with the maximum of nourishment and yet with all these illustrations and facts your reliance on first sales of a new va-riety if plants or cuttings be stolen from potash remain in the soil unused and where it is often becoming less available or suffering serious loss. Soil from which four successive large crops had been taken was found, on analysis, to contain in the fine earth 3,075 pounds of nitrogen, 3,784 pounds of phosphoric acid and 12,063 pounds of potash

per acre in the first foot of surface soil. For the purpose of comparison with the sixteen soils first spoken of at the beginning of this paper, these amounts must be reduced by one-third, since the one was computed on a basis of eight and the other on twelve inches depth. The sixteen soils contained on an average, eight inches

deen, per acre: Nitrogen 4,587 lbs. Phosphoric acid...., 4,267 lbs. Potash 41,600 lbs. The soil which had been cropped for

four consecutive years without fertilizers or manures, eight inches deep, per acre: Nitrogen 2,050 fbs. Phosphoric acid..... 2,523 fbs.

Potash 8,042 lbs. Although this much cropped soil contained but one-half as much nitrogen and phosphoric acid as did the sixteen soils analyzed, and only one-fifth as much potash, yet it produced without fertilizers or manures, this trying season, twenty-two

tons of trimmed sugar beets per acre. We must then conclude that it is not the amount of plant food which the soil contains but the amount made available for the plants which determined the yield. Our fathers summer-fallowed the land, that is, plowed it three or more times and harrowed it often to wake up the lazy plant food and make the soil productive. They realized the value of tickling the earth with plow shares more fully than

their children do. If we had studied the tillage problem more carefully we would have discovered that three, or at least two plowings could be given in one season and then instead of leaving the land idle an entire season, keep it constantly employed by securing one or two crops and a cover crop to be left on the land to protect it from winter degradation and to keep the plant food

from becoming tired. The details by which better results are to be secured are many, but the principles to be observed are few, and the foundation of all progressive agriculture is improved tillage. But tillage produces best results where there is an abundance of vegetable material in the soil and not only is this true, but humus of itself may be made to set free plant food as well as assist in conserving moisture and in cheap-

ening tillage.

The whole thought is not difficult grasp. Plants require a suitable supply of moisture, humus helps the soil to hold on to moisture and materially assists tillage in liberating plant food, while the plow and other implements of tillage may be used to make available the elements of plant life in the particles of soil and to co-operate with the humus in breaking down inert material and in forming a suitable seed bed, while both assist in preparing a suitable reservoir in the soil for

June.

the storage of moisture.

Written for Green's Fruit Grower by Ruth Raymond.

Raymond.

The summer's queen wears royal crown of crimson roses, and her gown Is fringed with starry daisles bright That lift their faces to the light. O'er woodland bower and shady lawn Birds carol sweet at golden dawn, And blushing maidens count the stars At dewy eve by mossy bars.

Then lovers 'neath the crescent moon Yow vows, the queen of Love is June.

Half Sick Half Well

Many persons have their good day and their bad day. Others are about half sick all the time. They have headache, backache, and are restless and nervous. Food does not taste good, and the digestion is poor; the skin is dry and sallow and disfigured with pimples or eruptions; sleep brings no rest and work is a burden. What is the cause of all this? Impure blood. And the remedy?

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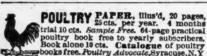
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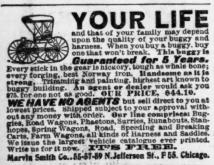
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OUR POULTRY DEPARTMENT

Suit the Market.

In some cities brown eggs will bring 5 cents per dozen more than white, while white eggs are favorites in other locali-Whatever is worth doing is worth doing well, is as applicable to raising eggs for market as to any other work .- I. R., Suffolk Co., Mass.

Variety Makes Eggs.

Wheat and corn should not form the diet of fowls exclusively, but clover hav cut fine and steamed should be given in the warm food, which should be served every morning during the winter season. Coffee and tea grounds are much relished by fowls also .- A. C. McPherson, Athens Co., Ohio.

Setting Turkeys.

I try to have my turkeys lay their first eggs where I wish to set them. Some-times they will try to lay out of doors or are looking for a nest and shut them in the barn or where I have placed the box with a nest egg. I often lift them up on the nest. I like to have the nest up off of the ground on account of skunks or rats. They sometimes need looking after before they commence to lay in order that the eggs will hatch .- S. E. M., East Berne

Chilly Chicks.

Directly they get that droopy look, it is wise to put them (covered with a piece of old flannel) into a basket by the kitchen stove. It makes a better brooder for the chilly little morsels than the old hen mother, who seems to have no patience with an ailing chick. A bread pill, well seasoned with cayenne pepper, will warm them up inwardly and makes the external heat more effective. Then a large shallow box for a "corral," carpeted with paper, with some dry bread-crumbs thrown down for them, and in a day or two they recover enough to mingle with the family again.—L. A., Nashville, Ore.

Work Economizes Food.

After keeping several pens of various breeds, some of the pens having been encouraged to exercise, while others were not, the Utah Experiment Station found that exercised fowls averaged 84 cents per fowl profit while others netted only 58 cents. The exercised hens ate more food, but they each laid over two dozen eggs extra to pay for the extra food, and the practical result was that 22 per cent, less food was required to produce a dozen eggs with exercise than without it. The director concludes that the practical value of exercise is to prevent a waste of food.

What to Sell.

During this season the room in the poultryhouse is worth something, and the inferior birds simply keep the others back. If there are many puny males they might as well be sold now as any other time, for they will not be worth a cent more in the future. In fact, the larger a cockerel becomes the less it will be worth, for just as soon as the comb becomes developed it goes into the market as an "old rooster," and brings less than five cents a pound. Cull out the fat hens also, for they bring the best prices and will not lay, and if there are any young pullets that are behind in growth, let them go, too, and cull the flock down to "normal." It is not economical to feed two birds when only one is giving a profit.

Hatching Early.

The best hens for bringing out chickens are those that are of a quiet disposition. Some varieties will not sit for the purpose at all, such as Leghorns, Spanish and Houdans. In a domestic state, however, such varieties seldom get broody, which compels people who wish to breed from them to keep a few fowls of another kind to hatch their eggs. March, April and May are the best months to hatch chickens, but eggs may be set even in the warm months by those who have houses and wish to have well-grown chicks in summer for the fall market. The risk of losing the young broods, however, from lice is great, and the extra care and attention they require may not in ordinary seasons repay the trouble of rearing them. Some varieties can be very successfully reared late, owing to the rapidity with which. they grow to maturity. Leghorns are perhaps the fastest growers, often beginning to lay before they are four months old. If an increase of eggs is desired in the poultry-yard before large sums of money are expended in the purchase of good layers the pullet should be hatched early.

Another Reader has Been Making Money Easy.

I noticed in your April paper that one of your readers had been very successful selling gaird's Non-Alcoholic Flavoring Powders, and Baird's Non-Alcoholic Flavoring Powders, and thought my experience would be interesting too. It is simply wonderful how much better these new fruit flavoring powders are than the liquid extracts sold in stores, when you stop to think that they cost only about half as much. You use them for cakes, custards, candies, ice cream, etc., just like the liquid. We used them ourselves and liked them so well that I wrote the manufacturers, W. H. Baird & Co., 118 Telephone Bidg., Pittsburg, Pa., for samples and tried seiling them to my neighbors. I only commenced a short time ago, but the powders are fast becoming celebrated around here and I have built up a steady trade from regular customers, often making over \$25.00 a week. I never knew of such an easy way to make money and I would recommend anyone having a little spare time to write this firm, for they are very generous in their dealings.—R. L. C.

Editor Green's Fruit Grower:

The Florida State Horticultural Society will hold its twelfth annual meeting in Jacksonville, May 2d to 5th. A member ship fee of \$1.00 entitles the sender to any one of its annual reports desired. These are the best sources of information about Florida .- S. Powers, Secretary,

A Raw Onion. Finely chopped and mixed with dough will cure gapes in chickens.—Mrs. M. V. B. Hall, N. H. A Louse Proof Nest.

The location of the nest has much to do with a good hatch. The best place is a noist cellar. Having selected a suitable place for the nest, dig a hole about one foot deep and one foot across. In the bottom of this hole put some coal ashes and sulphur. Over this foundation make the nest of tobacco stems, or of the best material you can get. Shape your nest to suit your hen and make a box large enough to cover it, with a hole in the box large enough to admit a good-sized hen, and your nest is complete. You will notice in what a contented and comfortable way the hen will settle on the nest, with no lice to suck her blood .- C. W. McQueen, Richmond Co., Ga.

Points on Testing Eggs.

To test eggs look at them through a strong light. See that they are perfectly clear, with not a dark spot through them. A good way to distinguish a fresh egg is the air-bubble in the large end. The smaller the air-bubble the fresher the egg. A fresh egg must be closely examined to see the air-bubble. Hold it up to an egg-tester, turn it around slowly, and look close near the top of the large end. If the bubble looks large, say one quarter of an inch deep, it should not be used. Get a fresh egg, newly laid, and make yourself familiar with the position and size of the air-bubble. You can then always distinguish a fresh egg, as the bubble becomes larger and larger every day. A fresh egg has a somewhat rough shell, while the shell of a stale egg is very smooth. When cooked the contents of a fresh egg sticks to the shell, and must be removed with a spoon, but a stale egg, when boiled hard, permits the shell to be peeled off like the skin of an orange. It takes a longer time to boil a fresh egg go to the woods. I watch them when they than it does for a stale egg, and fresh eggs are more easily beaten to a froth than stale ones. You cannot, however, distinguish a fertile egg until after it has been under a hen a week, though experts can do so after the fourth day.

Fattening for Market.

The first essential in fattening fowls to give more food, and this should be done three times a day until about ten days before the fowls are to be marketed. Bear in mind that you cannot fatten a turkey if you confine it in a coop alone. It will worry and lose flesh instead of gaining, as it prefers association with others. Feed the flock on a variety, giving corn and wheat morning and night, at noon allowing a meal of cut bone and meat. The turkeys will be in fairly good condition by the time they are to be penned, which should be about ten days before killing. Put them in a small yard, having four or five together, and give as much as they can eat at a meal. After they are penned let the morning meal consist of two parts corn-meal, two parts ground oats and one part ground meat. A little crude tallow added will be an advantage, also a table spoonful of linseed-meal for each bird. At noon give wheat, and at night whole corn. Do not forget grit, water and scalded cut clover hay.

Extracts from Correspondence.

A Roup Cure .- I notice this spoken of in your issue of November 15th under the title of "Heads Swelling," and the advice given was to make an end of the afflicted fowls. Now, in such cases, provided the birds were otherwise in good condition, rather than to kill I would first make an effort to save them by house thoroughly (a thing that ought to be done anyhow), sprinkling its interior well with carbolic acid, and having fastened the fowls in place in their drinking fountain turpentine at the rate of one teaspoonful to every gallon of water. They will probably not partake of it much the first day, but the second they will use it freely, and especially if nothing else is water every morning, add a little more of the turpentine daily, until it is ultimately increased to a tablespoonful instead of a teaspoonful, and feed only soft food. Make also an ointment in the proportion of two tablespoonfuls of lard to one of the turpentine; grease the head and throat of each fowl with it, and make it swallow a good-sized pill of the same. Rub its throat outside, and swab it inside with coal-tar. Repeat this process of treatment every morning for ten days or more, and if the poultry then are not singing and cackling as gaily as ever, and showing signs of laying, the sooner they are dispatched and burned the better.-F. O. S., Cooperstown,

Importance of the Egg.

The egg famine deserves to be classed as one of the most serious results of the longprotracted cold wave. The financial losses have been considerable, to say nothing of the inconveniences of depriving the population of this staple article of food. Some years ago Edward Atkinson attempted to arrive at the value of the annual egg crop, with the result that he found it more important than either the leaf tobacco, the barley, rye, rice or many other notable products of American farms. Abundant as is the yield of eggs, and low as is the price, he estimates the annual value at \$40,000,000 to \$60,000,000, which is more than double the worth of ordinary crops of barley or tobacco and many times the value of rye and buckwheat crops.

Taking the lowest figure of \$40,000,000 the average trade in eggs would be about \$800,000 a week, and it can be imagined what it means to have the consumption cut half in two for two weeks, as the case is now. As a rule, the increased price does not much interfere with the sale, for eggs at two or three cents apiece are still not an expensive article of food, as compared with beef, but it is always the case when the price is very high that few are to be found on any terms. It is certainly within the bounds of reason to say that the se vere weather which has stopped the production of eggs virtually for two weeks, has meant a loss of a million dollars, no inconsiderable item.-Louisville Courier-Journal.

A Fancy Egg Trade.

Do not sell to local store-keepers if you can do better at a distance. If possible secure customers among clubs, fashionable notels and high class private trade.

Make egg production a study. Manage so as to have an abundance of eggs when prices are at their best. In regard to the color of the shell, it pays to cater to the wishes of your trade. The Leghorns, Spanish and Minorcas are all producers of white eggs. Brahmas, Langshans, Cochins and Wyandottes lay brown eggs. The flavor of eggs is affected by the food. To produce fine flavored eggs, the hens should be fed on clean food. The feed trough, drinking vessels and the litter in which the some eggs are caused more by the putrid meat and decaying vegetables that the hens have eaten than by age.

Egg cases are cheap and you should have your own. Keep them clean, and when the fillers become soiled replace them with clean ones. Gather the eggs every evening and put them in the cases as you collect them; this plan will save handling them again. A strictly fresh egg has an attractive "bloom" that disappears with age and is rubbed off by handling. Keep all the small eggs and those that are soiled for home use.-M. B. Keech, Winneshiek Co., Ia.

Hatching-General Principles.

Editors Country Gentleman: In approaching the question of hatching, there are a number of general principles which every poultry-keeper should fully understand. no matter how small his operations may be or how extensive, for upon them must depend in great measure his success. This is especially true, if it is intended to hatch out of the ordinary season, for then we have to provide against contingencies which would not otherwise arise. Fowls would naturally only develop the maternal instinct in the spring, but, as it is necessary to secure a supply of eggs during the entire twelve months, and as considerable profit may be made by early chickens, we are compelled to upset the ordinary course. When the temperature is favorable, a broody hen may be placed anywhere, in the open air, or with very little in the way of protection; but if we are hatching during the colder season, this plan would not secure the best results, for it is essential that they be kept warm at this time. Nothing can be more adverse to the prolongation of the brooding instinct than cold, and hence the desirability of devoting some special place to the purposes of a hatching-room, where proper precautions can be taken in the direction indicated Isolation of Sitters.-There are other

reasons for doing this. The labor of attending to a large number of sitters is minimized, and they can be kept under closer observation. What the place shall be depends, of course, to a large extent upon the buildings available. There are not many who go to the expense of building with this object alone, and it is not requisite to do so in the majority of cases. There is usually some structure which can be utilized as a hatching room, especially as this will only be occupied during a few months. It is important, also, because hens sit much better during the period of hatching if undisturbed. Nothing is more likely to upset them than seeing other fowls running about, and there is further the danger of their being interfered with. Under no circumstances should they be allowed to make their nests in the roosting house. Most hens will bear removal, if this is done in a quiet and orderly manner. Personally I prefer for a hatching room one of the farm buildings, as they are usually much warmer than isolated structures, and thus the necessity of artificial heat is obviated. We must see, however, that the place is quiet, for if subject to great vibrations or shocks, the danger of deformities in the chickens is very much increased, and the same is true if doors are slammed, while the noise interferes with the comfort of the hens. The Hatching Place.—A most important

point in the selection of a hatching house or room is that it shall be dry, by which I do not mean that there shall be any artificial dryness, but that the walls and floor shall not be damp and cold, as this Dwyer, in New York Farmer. would be most injurious to the birds, mak ing them uncomfortable, and frequently explains why hens desert their nests. A New Cure for Kidney and Bladdamp house can never be warm. While place, it is all the better if facing the south, because there the sun has more power to keep it both warm and dry. One with a north aspect is not nearly so good, and should not be selected. The air should be sweet and pure and sufficient in quantity, for the oxygen would be speedily absorbed unless properly ventilated if a number of sitters were kept in one building at given them to drink. Simply put in fresh | the same time. Only within the last few years has the importance of the atmos phere in hatching been fully realized; but it is a question which cannot be ignored. Some time ago a gentleman who has made very careful observations with regard to artificial incubation stated that he believed the great majority of addled eggs and deaths in shell were directly caused by impure air, or an insufficient supply, and the same is equally true with regard to sitting hens, although, of course, from the fact that there is no lamp burning in the room, the danger of contamination is less than where artificial methods are em ployed. For this reason it is not desirable to make the upper part of a cattle shed into a hatching room, as the emanations arising from the animals beneath would certainly not be favorable to success. I have found the loft above a stable excellent for this purpose when properly ventilated, the heat rising from the horses at night maintaining an equable temperature in winter. Steps must always be taken to keep the air in the hatching room sweet by a proper system of ventilation, and during fine weather, especially in the middle of the day, it is an excellent plan to leave doors and windows open for an hour of two. The chief difficulty is always that by a condensation of the air it becomes damp, and also that the embryos are affected by the impure air which surrounds them. When this fact is fully realized, it is not at all difficult for any poultry keeper to avoid the difficulty mentioned. But ventilation should be overhead, as the fowl must not be subjected to draft.-Stephen

How the Weeder Works.

The first question asked by those unac quainted with the Weeder is, why will not the Weeder dig up and destroy the crop as well as the weeds? Simply this, all crops are planted from one to several inches deep, and the roots of the plants shoot out or down still further so that the plants are well rooted several inches below the surface. Only the weed seeds that are on or very near the surface germinates, and if the Weeder is run over the ground before the weed roots have made any considerable growth, the weeds are all killed by the Weeder fingers, which working only from a quarter to one inch deep do not disturb the crop in the least,

Paragrene.

recently patented by Fred L. Lavenburg 165 William St., New York City, who is also sole manufacturer of the well-known Star Brand of Paris green. Mr. Lavenburg claims for Paragrene that it is an effective and reliable improvement Paris green-that it can be used with absolute security against damage to plants. That it is uniform in strength. Is nearly double Paris green in bulk and consider ably less in cost. It surely costs but little to test it, as the manufacturer will grain is scattered should be clean. Keep send samples on application. When writing your hens out of the barnyard and hog Mr. Layenburg please mention that you The unpleasant odor and flavor of saw his offer in Green's Fruit Grower.

Lime for the Shells.

The gizzard is competent to render very fine the hardest material, but to do this it must be assisted by gravel, shells, sand or other sharp-cutting material. These ma terials may pass out of the system unless dissolved, which can be done by vegetable acids that separate the primitive elements of the various forms of lime. Bones are phosphate of lime, but egg-shells, chalk limestone and oyster-shells are carbonate of lime. They are insoluble in water, and cannot be appropriated by the hen until they are entirely changed in chemical composition by some substance that unites with them. Plaster is soluble, but may prove injurious if used freely. The best way to feed lime is in the grains, such as wheat, oats, buckwheat and barley. Clover hay is rich in lime, and so are peas and beans. The action of mineral substances is mostly mechanical, but while they may be insufficient, so far as providing lime is concerned, yet it is only a theory, and they are really more useful as grit. Many persons have provided their hens with all the oyster shells required, and yet they laid soft-shell eggs. It can be considered, however, that the difficulty may be weakness of the egg-making machinery. An egg traverses quite a distance before it is surrounded by the shell, and hens are subject to many disorders. Overfat hens, inbred hens and sickly hens are those usually affected.

A Hudson River Expert's Opinion of Red Raspberries.

It is twenty years since the introduction of Cuthbert raspberry. Before this variety became so profitable and popular we had very few of the native varieties. But Brandywine, Turner and Highland Hardy were the principal sorts under cultivation and these were all frail growers as compared with the Cuthbert and other native varieties of recent introduction. I have fruited the Loudon now for three years and am more and more favorably impressed with it after each season. I believe all things considered it is the coming red raspberry. On my ground the canes are fully as large as the Marion. It is very productive, of large exceptionally firm fruit, of attractive color and good flavor, but not of the best. The Loudon ripens a few days later than the Marlboro. The canes have never been injured here in the slightest degree by the winter weather. This has been the result without winter protection of any kind. A good companion for the Loudon is the Miller red raspberry which ripens early, or after our late strawberries. Its habit of growth and fruiting canes are quite similar to the Highland Hardy, but the fruit is decidedly distinct from that variety. The fruit is a shade smaller than the Cuthbert, round in shape, color a bright red, core very small. It is of a rich flavor and a good berry for distant shipment and like the Loudon the berries hold out large until the last picking. Probably no small fruit that has ever been introduced has given such universal satisfaction as the Cuthbert. It adapts itself to more different soils and climates than any other fruit, in fact, large or small, that I am acquainted with. For this reason the Cuthbert is even to this day a very popular variety. Its chief drawback is the somewhat unattractive color of the fruit and that it ripens very late in the season. In this section of the country and in fact in other sections quite remote from here the Marlboro has been a great favorite for many years .- T. J.

der Diseases, Rheumatism, etc.-Free to our Readers. Our readers will be glad to know that the new botanical discovery, Alkavis, has proved a certain cure for all diseases caused by Uric acid in the blood, or by disordered action of the Kidneys or urinary organs. It is a wonderful discovery, with a record of 1,200 hospital cures in 30 days. It acts directly upon the blood and kidneys, and is a true specific, just as quinine is in malaria. Rev. W. B. Moore, D. D., of Washington, testifies in the New York Christian Witness that Alkavis completely cured him of Rheumatism and Kidney and Bladder disease of many years' standing. Many ladies also testify to its curative powers in disorders peculiar to womanhood. So far the Church Kidney Cure Company, No. 409 Fourth Avenue New York, are the only importers of this new remedy, and they are so anxious to prove its value that for the sake of introduction they will send a free treatment of Alkavis prepaid by mail to every reader of Green's Fruit Grower who is a Sufferer from any form of Kidney or Bladder Disorder, Bright's Disease, Rhematism, Dropsy, Gravel, Pain in Back, difficult or too frequent passing water, or other affliction due to improper action of the Kidneys or Urinary Organs. We advise all Sufferers to send their names and address to the company, and receive the Alkavis free. It is sent to you entirely free, to prove its wonderful curative powers.

Twenty-Five Dollars Cash Prize for the Name of a New Strawberry.

This offer has not received as much attention as we had supposed, and it looks as though some one would get twenty-five dollars who has not sent in a very acceptable name for this new and valuable strawberry, now known as "Green's Big Berry.'

We, therefore, call your attention to our offer, which is made on condition that whoever submits a name, and expects to get the prize, shall order at least a few of these plants at the same time. We are willing to pay the twenty-five dollars, but we are far from satisfied with the names that have been sent in so far, although some are much better than others. We have felt confident that some one

would suggest a name better than any we could think of ourselves. Please give this your attention. Green's Big Berry is the largest berry we have ever seen and is desirable in every way. It is worthy of a good name. GREEN'S NURSERY CO.,

Three Hundred Varieties Mixed Flower Seeds, by Mail, Post-Paid, for 15 Cents.

Rochester, N. Y.

Or, we will send the above flower seeds free by mail to all who send us 35 cents for Green's Fruit Grower, nine months, to January 1, 1900.

Or we will mail these flower seeds free by mail to all who send us 25 cents for of fertilizer is used. They need fertilizing any one of Green's Books, the books also to be sent by mail, post-paid. These books worked into the soil adds to their thrift. are as follows: First, Green's American | The old idea that quinces will not endure Fruit Growing; second, Green's American Poultry Keening: third, Green's Six Field Books on Fruit Culture, under one cover fourth, Green's Four Books on Fruit Cul ture, under one cover.

Green's Fruit Grower, Rochester, N. Y.

I AM A PHYSICIAN And "5 DROPS" Has Cured

HUNDREDS OF MY PATIENTS. The above statement has just been received from Dr. C. A. Jackson, the well-known Physician and Surgeon of Kearney, Neb. His letter, with others, is printed below:

Dear Sir:—I am a Physician and graduate of the University of Sweden, and have been in active practice for more than 30 years, but I must confess that no remedy has so astonished me in its cures as your 5 DROPS." I have recommended it to hundreds of my patients who have been afflicted with Rheumanism and they inform me that they are cured. Kindly send me the "5 DROPS" as directed.

Very truly yours, C. A. JACKSON, M. D. Oxford, Chenango Co., N. Y., March 20, 1899.

Very truly yours,

Oxford, Chenango Co., N. Y., March 29, 1899.

Dear Sir:—I thought I would write a statement of my case and how I was when I commenced using your wonderful "5 DROPS." I had Rheumatism so bad I had to give up. My little girl had to comb my hair as I could not move my arms, I could not turn over in bed without my wife's help. Then I got' the La Grippe and gave up hope of ever getting well. All the doctors I had did not do me any good. Since I began taking your "5 DROPS." I have been getting better every day and though I could not work for four months I can now do my chores and tend to my stock without any help. "5 DROPS." is the best medicine I ever used or heard of, and I am thankful for what it has done for me. Yours very truly,

CHAS. D. KENYON.

Mr. S. H. Preston, of Cuba, Ill., writes us March 16th, 1899.

Gentlemen:—This is to certify that I have worked at blacksmithing for forty years. Am now sixty. four years of age. Thought I was past work, being all broken down with Kidney Trouble, Neuralgia, Hay Fever and Asthma. Suffered intensely with pain almost constantly throughout my whole body. Took La Grippe which laid me up badly. I tried almost all kinds of remedics, but gradually grew worse until I tried "5 DROPS." Used your Inhaler also. In three weeks' time I must say after using "5 DROPS." I feel like a new man. Pain all gone, appetite improved wonderfully. I can sleep all right and am galning strength right along. Am now working every day in my shop. Success to your great pain remedy, "5 DROPS."

If you have not sufficient confidence after reading these letters to send for a large bottle, send 10 cents for a sample bottle, which contains sufficient medicine to convince you of its merits. This wonderful curative gives almost instant relief and is a permanent cure for Rheumatism, Sciatica, Neuralgia, Dyspepsia, Backache, Asthma, Hay Fever, Catarrh, Sleeplessness, Nervousness, Nervousnand Neuralgic Headaches, Heart Weakness Toothache, Earache, Croup, "La Crippe," Malaria, Creeping Numbuses

SWANSON RHEUMATIC CURE CO. 167 DEARBORN ST., CHICAGO, ILL. Please mention Green's Fruit Grower.

GREEN'S POULTRY YARDS,

Rochester, N. Y.

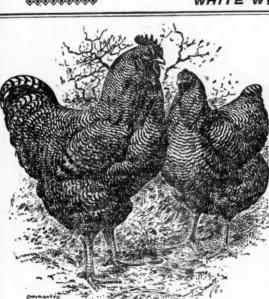


HORN. The acknowledged queen of the practical egglishing breeds is the Leghorn when judged by the standard of the greatest number of marketable eggs produced. of the greatest number of marketable eggs produced at least cost. Not only are the hens persistent layers, but they are extremely active foragers and waste no time in sitting. Like a good milch cow they put little fat u,on their bones, but devote eil surplus nourishment to sleady production. They eat less than the heavy breeds, but whatever tney consume is put to good purpose. Maturing in four or live months, the cost of growing them is comparatively light; no more, perhaps, than one-half that of Brahma or Cochin.—American Agriculturist.

THE POPULAR LEG-

THE WHITE WYAN-DOTTE is one of the handsomest fowls known: large size, good layers, and highly prized for their meat. The New York markets will, in time, more fully appreciate the value of the Wyandotte for its delicacy on the table of the epicure. It will be noticed that no breed has all the good qualities, therefore if we want all the good qualities, we must have more than one breed, but surely no one can make a mistake in breeding the White Wyandotte, considering their beauty, egg laying propensities and desirability in markets of the world.

Prices for Eggs, \$1.50 for



BARRED PLYMOUTH ROCKS.

BARRED PLYMOUTH ROCKS. This breed is as solid as its

name and is often called the "Farmer's Friend," the "All Round Fowl," the "Old Reliable." It is the bird for business, and deemed by many the best fowl for farm and home raising. It is not only a good layer, but is quick to devclop for the early market. As a far-sighted farmer once said to us, "When you kill one you've got something." Price for eggs, \$1.50 for

PEKIN

DUCKS. Best Ducks on earth. Price for eggs from Prize Stock, \$1.50 for 13. Drakes, \$2.00

Poultry Department of Green's Nursery Co.,

ROCHESTER, N. Y.



PEKIN DUCKS.

These are the best and most popular ducks. They are of large size and mature quickly. We offer until sold, a few

PEKIN DRAKES AT \$2.00 EACH. FEKIN DUCK'S EGGS, \$1.50 per 13.

These are bred from a flock that has taken prizes at exhibitions. GREEN'S NURSERY CO. ROCHESTER, N. Y Poultry Dept.

Quinces.

Quinces do not do well everywhere, but there are very few places where they will not fruit. They occupy but little ground and their fruit is always in demand. The peculiar flavor of the fruit is strong enough to flavor many times its own weight of other fruit preserves, when used for this

The quince and the asparagus plant enjoy the peculiarity of being able to assimilate more salt than any other two members of the vegetable kingdom thus far brought under cultivation. If manure from the pigsty is used about quince trees, the seem to do better than if any other kind every year, and in the spring a little salt pruning has long been exploded.-Farmers'

ture, under one cover.

Please tell your friends. Address ASTHMA free, DR.W.R. WALRATH, Box R. Adams, N. Y.



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25c. for half pound and 40c. for

pound packages. By express we can sell this grafting wax at 25c, per pound. Remember that postage costs us 16c, per pound. Address GREEN'S FRUIT GROWER, Rochester, N. Y

SICIAN

PATIENTS.

and have been in active prached me in its cures as your "!
en afflicted with Rheuma. C. A. JACKSON, M. D. Co., N. Y., March 20, 1899.

rery truly, CHAS. D. KENYON. writes us March 16th, 1890. forty years. Am now sixty-liney Trouble, Neuralgia, dies, but gradually grew worsa me I must say after using "8 ierfully. I can sleep all rish. Success to your

merits. This wonderful cura-Sciatica, Neuralgia, Dysss, Nervousness, Nervous che, Croup, "La Grippe,"

1.00. Six bottles \$5.00. 25 cent T., CHICAGO, ILL.

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THE POPULAR LEG-IORN. The acknowledged v. The acknowledged of the practical eggween of the practical egg-ying breeds is the Leghorn hen judged by the standard f the greatest number of narketable eggs produced t least cost. Not only are he hens persistent layers, ut they are extremely ilch cow they put little fat oon their bones, but devote il surplus nourishment to leady production. They at less than the heavy breeds, but whatever they onsume is put to good pur-pose. Maturing in four or tye months, the cost of trowing them is compara-dively light; no more, per-paps, than one-half that of Brahma or Cochin.—Ameri-an Americativistic. ice for eggs, \$1.00 for



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ROCKS. This breed is as solid as its me and is often called the Farmer's Friend," the "All ind Fowl," the "Old Reble." It is the bird for busiss, and deemed by many the st fowl for farm and home sing. It is not only a good er but is quick to develop r the early market. As sighted farmer once said us. "When you kill one u've got something."

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make money by getting their produce into market early. This is best accomplished by taking advantage of the stimulating effect of Nitrate of Soda It forces the most rapid growth and imparts quality, crispness, tenderness, etc. All about it in our free

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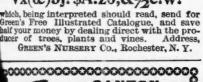
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ew know the value of this as a relish to eat th cold meats. It will grow without culture, will give best results if planted where it can hoed. Price, strong sets, by express, 12 for 100 for 50 cents. GREEN'S NURSERY CO., Rochester, N. Y.

\$10 CASH paid per 1000 for used stamps. Send 10c. for price-list paid. A. Scott, Cohoes, N. Y

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EDWARD W. WALKER CARRAGE CO.

GOSHEN, INDIANA.

The Story Teller.

A Nevada Bride, or the Ranchman's Wooing.

By CHARLES A. GREEN.

The good people who live in the densely populated portions of our country have but ittle idea of the difficulties encountered by those who are isolated on the plains, or in the mountains, far removed from civilizaion, and from all social intercourse, when such isolated people desire to get married. The following incident is an actual occurrence, telling how a Nevada stockman se-

eured his bride under difficulties. John Douglas belonged to a good family which had long resided on the Pacific coast. His father having lost a large forune through speculative enterprises, the son started out with a brave heart, when quite young, to make his way alone in the vorld on the plains.

John Douglas was of a venturesome disposition, was something of a recluse by nature, therefore the idea of secluding himself from civilization for a series of years was not so great a hardship for him as it might be for many people. But this young man had determined to make a success of life, though he should be compelled to endure great privations and dangers. If he had been favored with capital, so as to be able to go into business near home, this would have been his choice, but he did not have this capital, and his only opportunity seemed to lie along the line of cattle raising on the plains, not far distant from the foot hills of the Nevada

nountains on the Eastern slope. John wandered about for months, with no other companions than his horse and rifle, searching for the most desirable spot to locate his ranch in the section of country where he had decided to remain. The difficulty was to secure pure water uncontaminated with alkali. He at last found a spot where this water could be secured, not far from a river, and here he located his claim, and built his rough

It is not necessary to relate the details of John Douglas' small beginning in stock raising, more than to say that he began in the smallest way and gradually inreased his herds until they were of considerable magnitude, and he might be considered on the highway to wealth and prosperity.

When he first located his ranch there was no living person within a hundred miles, but later on other men of venturesome disositions, located within ten or twelve niles of his place. Surely all these men knew each other almost as well as villagers know each other, and held frequent

As the reader may suspect, John Douglas needed a wife. How was he to get one? There was no woman of his former equaintances whom he could ask to share his isolated lot, or who would be contented to live in such a secluded place removed from all society. None of the herdsnen within a hundred miles of him had marriageable daughters. Indeed, most of them were like himself-lonely and discon-

solate bachelors. John Douglas' position was neculiar. He and succeeded in raising extensive herds. which he could not leave for a day owing to the presence of the Piute and Washoe Indians, who inhabited that region, and who would have stolen his cattle had he There are many men who live in villages

and cities who find it difficult to get married. There are plenty of young women who might seem to be desirable, and yet the bachelor cannot find one to his liking. How much greater the difficulties surrounding John Douglas in getting a wife. There are men on every farm, in every workshop, in every village and city, who earnestly and devoutly desire to have a companion for life. Even in the densely populated sections of the East men feel the need of companionship, sympathy and love such as only a good wife can give. But how much more should John Douglas desire a wife, located as he was-far away from any human being-obliged to pass days, months and years in solitude. cooking his own food, with the possibility of death, should he be overtaken by disease with no one to watch over him, or

nurse him. Surely here was a climax. John Dougas must have a wife. His neighbors twelve, fifty or one hundred miles away enew that he must have a wife. One day a horseman, clad in the rough garments of the herder, galloped up to John Douglas' door, exclaiming, "I have

"Found what?" asked John. "I have found a wife for you."

"Where is she?" asked John. "She is camped down by the river about four miles away. There are four or five of them, with their fathers and mothers, and you may take your pick of the lot." At the earnest solicitations of John Douglas the visitor dismounted and explained more particularly that several wagons filled with settlers on their way across the plains, had camped at the fording place of he river near by, and that among them

were several daughters of marriageable Living Near to Nature's Heart.

John Douglas immediately saddled his best horse, donned his best clothes, brushed out his beard, smoothed down his hair, leaped into the saddle and galloped off for the river.

Now, John was a handsome, sturdy fellow, fully six feet in his stockings, straight as an arrow, with a strong, prominent nose, and bright honest eyes. Indeed, such a man as any young woman might look upon with interest or pride, as the case might be. It is my opinion that the average young woman of Eastern cities would stop to gaze at this young man as he dashed by on the eventful errand of finding a wife.

It was but a few moments before John Douglas drew the reins of his horse before the camp, where the surprised people were resting. The fathers, mothers and daughters were gathered together about one of the wagons as John drew near. Raising his soft, felt hat, he addressed the young women as follows: "I am John Douglas, the owner of this ranch, and the owner of all the stock feeding on it. I have been living alone here for five years. want a wife. I cannot leave my stock for if I do it will be stolen by the Indians. therefore, I cannot go East or West in search of a wife, as I otherwise would. Which of you girls will have me for a husband?"

The young women, who by the way were a comely lot, robust and healthy, and apparently well but roughly bred, cast inquiring glances one to the other, dropped their eyes modestly, and hesitated. After a few moments of silence, one of the young women replied, "I would marry if could find the right man."

Then John Douglas leaped from his horse and explained to the party that he was well known on the Pacific coast where the new-comers were intending to go, and he said he would be glad to give references to well known people there, so that the father and mother of this young woman might learn who he was, and whether he was a suitable man to marry this young woman. It was agreed that if the father and mother should get a good report of John Douglas from the people in California, the young woman should return and become the wife of John Douglas.

As may be imagined the succeeding weeks and months were more desolate and dreary than ordinary with John Douglas, and yet there was this change for the bet ter, he had something unusual to keep his mind occupied, and that was the improve ment of his house to get ready for the new-comer. Not only did he build an addition, commodious in the extreme compared with his former quarters, but he ordered sent to him household goods, furniture and equipments, such as had not before been known in that part of the country. He seemed to have confidence that the young woman would return. It is possible that more words passed between them than I have recorded.

Many of the readers of Green's Fruit Grower will consider this a queer courtship, and will criticise the conduct of the young woman in setting out on horseback to cross a vast stretch of country, most of the way entirely alone, for the purpose of marrying John Douglas, whom she had met but once, but this she did as a matter of fact, and as a matter of historical truth. She did undertake this journey, she did arrive safely at John Douglas home, she did become his wife, and they lived happily and prosperously together throughout life's long journey.

The gentleman who related this incident to the writer, visited John Douglas and his wife after they had been married many years, and after they had become exceedingly prosperous. At this time they had three stalwart sons, strong, manly fellows, and one fair-haired daughter, who were the life and joy of that Nevada

John Douglas had many interesting stories to relate of the Piute and Washoe Indians who surrounded him. These Indians were always engaged in strife and warfare. Their principal article of food, at least at certain seasons, were acorns, and the tribe of Indians which was in the ascendency would not allow the other tribe to gather any nuts, except of such small varieties as the dominant tribe might indicate and set aside for the other tribe. The tribe which for the moment dominated, would not allow any member of the other tribe to ride a horse, but would, ompel him to go on foot. Sometimes & e tribe would be in control of the situation, and then again the other tribe would be in command. At the time of my friend's visit the Piute Indians were in the ascendency. No Indians other than the Piute could ride a horse. If a Washoe Indian was found on a horse he was taken off and beaten, and his horse

was stolen from him This Will Interest Many.

F. W. Parkhurst, the Boston publisher, says that if anyone who is afflicted with rheumatism in any form, or neuralgia, will send their address to him at Box 1,501, Boston, Mass., he will direct them to a perfect cure. He has nothing to sell or give, only tells you how he was cured. Hundreds have tested it with success.

ADIES WANTED to take up stamping at home We pay 10 cents an hour while learning. H. F. JONES, Dept. B. T. Brooklyn, N. Y

"I'll never rest, Jim," said Bolton to Graham, his old bachelor chum, "until you are married and settled down out there, too, with a dear little wife."

George Bolton and his young wife decided last fall to move to the country for the winter, being actuated by motives of economy, George also being a little tired of the frivolities of the city.

"Um," said Graham, reflectively, "Its pretty cold in the country in winter. But you write me about it, and if it sounds well, I may marry and settle down." "Cold. cold?" retorted George. fiddlesticks. Can't you stand a little fresh air? What we all need is the country; chance to get into the open air and let our souls expand!" and George smiled a beautiful, serious smile.

"I will write you all about it, anyway, Jim." he added. "You'll be green with envy in no time. Good-by!" And so these are some of George's promised missives, written from his "little nest," as he called it, in the country:

Woodhedge, N. J., December 3. Dear Jim: Well, here we are in our little house on the hill, and I am looking forward to a long, fine winter. A winter in the open country, with the snowcovered hills rolling to the horizon and at night a myriad of twinkling stars shining down through the crisp air, is something I have looked forward to all my life. I believe I shall be a better man for it, and there certainly will be a splendid chance for reading and study in the long evenings. The theater and opera are all well enough, but in the city life is too much on the surface. The city does not give one the purpose that the glorious

country inspires. Clara is very happy, though she had rather a blow yesterday. I engaged a village truckman here to bring out our best furniture, because the railroads usually handle it so roughly. But his driver got beastly drunk in the city, and his team ran away down that long Leonia hill. These country people are hardly as honest as I expected! The truckman acknowledged that his driver was drunk, but said that "if our furniture had not been so thin and otten it would not have smashed so bad-That was so absurd! But I don't think he will pay anything.

We are going to have you out soon. shall never be very happy till you marry and settle down out here. Ever yours, GEORGE BOLTON. P. S .- I note by the papers that Alba F. had a great first night at the Garrick.

Did you see her? Woodhedge, N. J., December 18. Dear Jim: This is a beautiful spot, right on the long sloping hillside, with the valley lying almost at our feet. There seems to be a great deal of wind here, and I imagine it must be very cool here in summer. I notice these frame houses in

the country do not seem to be built as

compactly as the city houses. We are not quite settled yet, and I had no idea how much like work it was to carry furniture and pictures up and down stairs. I am afraid that those city flats rather spoiled me. By the way, I should like to look in some Friday night on you boys. I suppose you still meet on Fri days for the game, don't you? I don't be lieve in letting the limit run over 25 cents. or, say, on jack pots 50 cents at the outside. People out here don't seem to be very fond of cards, and I understand that it is pretty quiet in the winter time, any-

Clara is well and looks very sweet. She is a little troubled about a servant. Ours simply because I attend to the furnace. has just left us. I am told that it is very difficult to get good servants here. I look | though the thermometer was down to 20 after the furnace myself, though I am not "on to all its curves" yet, but I rather favor some light, regular work like this before breakfast. We seem to have a very poor furnace.

Do you still keep up the Kit-Kat Society? I understand there is going to be a great time at the club on Christmas Eve. I am thinking a little of coming into the city for the holidays another year.

Ever yours, GEORGE BOLTON. Woodhedge, N. J., December 28. Dear Jim: I suppose that perhaps be cause we have had a rather hard time getting settled I may be a little morbid on the subject, but it does seem to me that I never saw such a sad-faced lot of people as cross on those Jersey ferryboats. There is a certain discouraged, dispirited look

that they all have. Of course, it is all imagination on my part, but I find myself sometimes wondering if I shall ever have it. Absurd, isn't it? Clara hasn't written you to come out for, to tell the truth, she has been rather sorely tried on the servant-girl question, and we have had to make housekeeping a sort of picnic, as it were. It is very funny We laugh about it a good deal. The mar-

kets here are rather poor, and I have got into the way of stopping at the Washing ton Market on my way home from the office. Carrying beefsteak up on the train was something I hadn't counted on, but I note that a good many other people on the ferry do the same thing. I hate those ferryboats; they are so

stuffy inside and so cold out. I used to hink the sail across the river morning and night would be so refreshing, but the fogs have delayed us frightfully, and have

TILLAGE IS MANURE

Agricultural Experimenter, actually raise twelve good successive crops on the same groun without any manure. He says: "I can show on " of the experiments I have recommended which

must convince every man who sees it (and doth 'must convince every man who sees it (and doth 'not renounce the evidence of his own senses and reason) that pulverization by instruments can vasily exceed the benefit of common manure."

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if not entirely satisfactory.

For all soils, all work-

crushes, cuts, lifts, pulver-

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steel and wrought iron, there-

fore indestructible. Cheap-

est riding harrow and best

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to 131/2 feet. I deliver free on

board at New York, Chicago, Minneapolis, Minn.; Colum-

bus, O.; Louisville, Ky.; San

Francisco and other points.

The Acme will be

made me so late for the office that I have een worried a good deal about it.

Your letter about the little theater party, and especially the supper afterward, almost set me wild. Clara and I feel a good deal cut off from that sort of thing this winter. But the city can never be so satisfying in many ways as the country must be. Here one can get so close to Your friend,

GEORGE B. Woodhedge, N. J., January 7. Dear Jim: It is always a mistake for people to claim too much and too many virtues for anything that they like. Now, for instance, country life has undoubtedly many good points. But I can't see that economy is one of them. Yet people told me that it was vastly cheaper to live in the country than in the city. Why, already it has cost me about \$100 in little odd jobs about the house that have been

absolutely necessary.

Have I written you since New Year's? You know it went 8 degrees below zero here. A curious thing happened. I started to take my bath that morning, but not a drop of water would come. Nothing upsets me so as to miss my morning bath. couldn't imagine what the matter was. wasn't more than half dressed when the maid came pounding at the door and declared that the pipes were frozen. I thought she meant my briarwoods, and I told her she was crazy. But it seemed she meant the water pines. Did you ever hear of such a thing happening before?

Well, poor Clara seemed to be badly broken up, and began to weep. I knew it was a bad sign when a woman cries before breakfast, and so I telegraphed for her mother. She arrived about 11 o'clock. Clara's mother is an extremely energetic woman. She set me on a still hunt for the particular spot in the pipes that was frozen, and I believe I wrapped a scalding rag around ten miles of lead pipe that New Year's day. But the particular spot that was frozen was at the bend of the pipe, back of the tank in the garret. The only way to get there was to crawl on my stomach through an inch of dust and broken glass. It was 4 P. M. when I had those pipes thawed out and I was swearing mad—a nice way to begin the New Year!

Then my mother-in-law declared that the pipes must be wrapped in old flannel to prevent freezing again. Clara said that she had no old flannel, as she had just started in housekeeping. Her mother in sisted that flannel she must have. So Clara brought up three pairs of almost new undergarments (nether) of mine, and seemed to think it a good sort of joke. That must have been a great little din-

ner you all had at the Cafe de l' Avenue, There is still plenty of local color and a jolly girl or two to be found at a place like that. I sometimes wonder if I shall ever be doing that sort of thing again. I am afraid not, or, rather, I hardly believe I shall. But I am almost in favor another year of staying in town till the weather moderates. Yours faithfully. GEORGE BOLTON.

Woodhedge, N. J., January 19. Dear Jim: We have just been through most exasperating and atrocious experience. Four days ago a most horrible odor began to pervade the whole house. We couldn't locate it anywhere, but it grew vorse every hour, and became so terrific that Clara and I were actually nauseated, and the maid went out at noon and did not return. We searched everywhere to find the trouble, for there was evidently something dead somewhere. Finally it seemed to me that the stench came strongest from the region of the furnace, and Clara seemed to think it must be my fault, We decided to let the fire go out, but, aldegrees all over the house, the smell was worse than ever. On the fourth day, after we had been fairly frozen, I managed to get a man up from the village. He took down all the brick work around the furnace and found a large gray cat close to the fire. It had been dead almost a week, and the man had difficulty in shoveling it

I know this is fearfully disgusting, but I tell it to you so that you will never be caught the same way. It seems that the cold-air box that leads to the furnace opens under the front piazza. Ours did not have any grating over it, as it should have, and the gray cat crawled under the piazza and thence along the cold-air box till it came to the furnace, where it evidently had a fit or something, and died. You can't be too careful, if you are ever persuaded to take a house in the country, to see that gratings are put over all openings like that.

Clara and I have a fearful cold, but that was to be expected with the furnace out so long. Clara feels very badly because this job of taking out the cat cost \$9, but I tell her it doesn't do to expect that all the economies of suburban country living can be effected in the first winter.

Don't think I will write any more just now. For heaven's sake don't tell me of any more larks that you chaps have been having. It is too exasperating. Yours, etc.,

Woodhedge, N. J., February 2. Dear Jim: I could almost stand the beastly weather conditions on this bleak toboggan-slide where we exist, if only all the people and servants weren't so blasted stupid. Nora, our cook, a creature that Clara got hold of, Lord knows where! i the worst of the lot. But, pshaw, what's the use of writing about our troubles? I suppose the city must have lots of drawbacks, too, though I must admit I was pretty happy there. I'll see you next week: going to stay down a night for a little breathing spell, and Clara is going to her mother's for a day or so.

February 2, 9 P. M. Dear Jim: We're off to-morrow. For good! Couldn't stand this, you know! Clara sick and me pretty badly knocked out. Decided to go to the city and stay

Thank the Lord it's over. Pretty tough to pay double rent, but if we had to stay here any longer, Poe's stories wouldn't have been a patch on my experiences. Happily yours, GEORGE B.

Jim Graham is still a bachelor and lives in the city in winter .- New York Tribune.

Loudon.

Mr. C. A. Green: Dear Sir-All of the trees except three grew and have done well. About onethird of the peach, cherry and plum trees bore last year and were true to name. Some of the peach trees had 12 fine peaches on. They all made a vigorous growth last year.

The Loudon raspberries have borne two seasons. They are very large and firm and have stood a temperature of more than 20 degrees below zero, and are alive to the tips. Thanking you for past favors, I remain-Yours respectfully, T. J. Midg-

Any patron of Green's Nursery Company who fails to receive our new lithograph cover catalogue for spring, 1899, by Febru ary 1st should send for it. Address GREEN'S NURSERY CO., Rochester, N. Y.

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Hartford and

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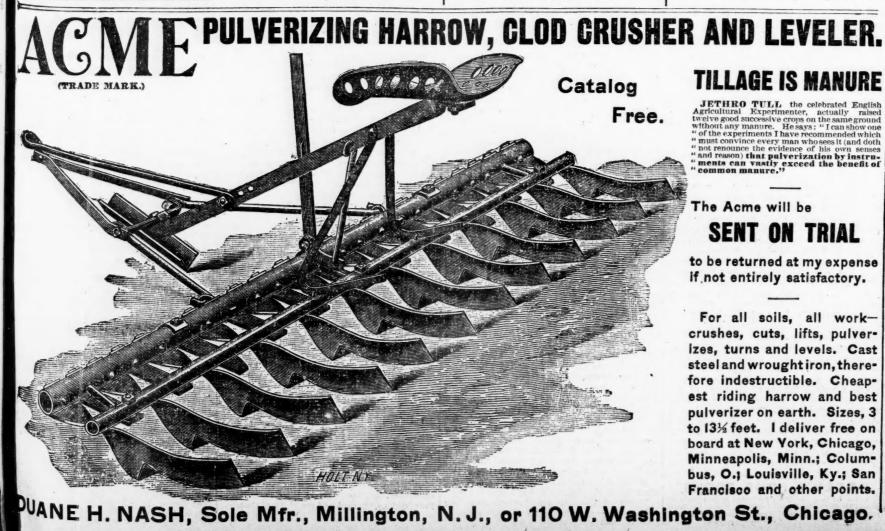
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POPE MANUFACTURING COMPANY, Hartford, Cons.



shipment better than apples ordinarily

packed, and will not freeze nearly so easily

since paper is a marvelous protector

and particularly in Southern cities, Wash-

such fruit late in the spring. We advise

our readers to experiment with this fancy

in the ordinary way, without paper, di-

o a commission house in Washington, D

C., at a profitable price, after paying for

the handling, cold storage, and other nec-

essary work. The buyers of these apples

required that we empty them out of the

barrels, removing any that might be de-

cayed. The entire carload thus shrank,

perhaps, three barrels from the decayed

apples and from the actual shrinkage of

It will be noticed that in these apples,

packed without paper, there was an occa-

sional decayed apple, which made it neces-

sary to repack the entire carload at con-

siderable expense. If these apples had

been wrapped each in paper, it would not

have been necessary to repack them since

there would not have been any decayed

apples, or if there had been one or two in

any barrel it would not have been serious.

Green's Fruit Grower having, therefore

tested the storage of apples in warehouses

fully equipped with refrigerator devices.

scarcity, and in both cases with profit, can

ecommend such storage to the readers of

Remember, that the old idea that apples

must undergo a sweating process before

being packed in barrels for shipment, or

for cold storage is thoroughly exploded

Green's Fruit Grower has combated this

old idea for many years, and is gratified

at last to find its theory sustained by prac-

Death Riding on a Sunbeam.

Readers of Green's Fruit Grower hav

often seen motes or small atoms floating in

rays of sunshine, which stream into a

omewhat darkened room. The air of

houses is continually filled with these

atoms. If a room has been recently swept,

or is frequently used, there will be more

of these atoms. If the room is but little

used there will be less. These small par-

ticles floating in the air are ordinarily not

visible, being too small to be seen with

the naked eye under ordinary circum-

stances. But examined under the micro-

scope these floating waifs are found to

consist of splinters of the floor, pieces of

wool from the carpet, cotton from the cur-

tains, or garments, particles of hair, dan-

druff, or pieces of the skin of the human

body, and numerous bacteria, deadly and

harmless; also, germs of moulds and other

I was shown under a powerful micro

cope one of these motes which was found

floating in a dwelling. The atom was of

wood and looked as long as my finger. I

could plainly see that it was wood. At

one end of this splinter was a colony of

bacteria numbering thousands. A little

further along was another colony of

bacteria composed of large numbers, and

at the opposite end was still another col-

ony. A single disease germ had fastened

upon the splinter and at the three different

points and had begun to increase by divis

ion, each little germ separating the cen-

ter, forming two separate bodies, and each

in turn continuing to separate until count-

less millions might be produced within a

The air we breathe is constantly filled

with germs of disease which are too smal

to be seen. Often thousands of them

night be raised upon the point of a needle

These disease germs have of themselves

no power of locomotion, except typhoic

fever germs which inhabit water. There

fore, most disease germs can only move

after the material in which they are en

compassed becomes dry and powdered and

the germs are blown about with the wind

If we pass through the streets of a city

on a dry, windy day we gather in our nos

trils, and take into our lungs, numerous

germs of disease. If we are strong and

robust these germs are destroyed in our

bodies, doing us no injury. If we are feeble

we may suffer death by these germs. For

instance, if our throats are sore or in-

damed and the germ of diphtheria lodges

there, under these conditions we are very

Germs of disease are disseminated

through drinking cups, or goblets, from

which different people drink, from paper

of dirty hands, through silver and copper

coins, through vegetables that are eater

in a raw state, like celery, lettuce and

radishes, grown on soil fertilized with

night soil of cities. One of the most suc-

cessful mediums of carrying diseases in

the family or in a hotel is the fork in eat

ing. This fork passes into the mouth of

some person three times a day. The germs

of disease from sickly persons may accu

mulate between the tines of the fork, and

since the spaces between the tines are diffi-

cult of cleaning, the germs are liable t

remain there, particularly down near the

shank. Examine a fork and you will find

this to be the case. Every individua

should have a fork to be used by no other

Our blood is composed of white and red

corpuscles. The white corpuscles have the

remarkable faculty of passing through the

walls of the veins without leaving an open-

ing through those walls. These white cells

are continually passing through the walls

of the veins, after which they search for

lisease germs in the body, surround these

germs and consume them. There are ex

ceptional times when the disease germs

the cells. Out of over 500 known varietie

of bacteria there are but 25 known as dis-

A cake, pie, dish of pudding, or anything

of that kind, laid upon a shelf, after an

settle there with dust from the air sur-

rounding. Some of these germs are mould

lozens of kinds of different germs upon

one dish. It will be seen, therefore, that

selves from the germs of disease, but we

can resist them by keeping in vigorou

Not only are animals subject to disease

germs, but also plants, trees and fruits

For many years scientific men have at

tempted to learn why the clover plant in

creased the fertility of the land so rapidly

that there is a form of bacteria (disease

germ) which preys upon the roots of the

a knotted form, and this disease in the

clover root produces nitrogen, which is the

farmer and the fruit grower. The above

thoughts were gleaned from a talk by

CREEN'S FOUR BOOKS

ost desirable element of fertility for the

clover, forming a diseased condition there.

t is only recently that they have found

is not possible for us to exclude our-

There may be a collection of

hour will be covered with germs which

ontain poisonous matters which destroy

person, especially sick people.

ease producing germs.

oney which has passed through hundred

or in the air of houses.

likely to have diphtheria.

nicrobes.

few days.

tical fruit growers at the present date.

this paper, and patrons.

seasons of plenty and in seasons of

April we sold a carload of these Bancy

fruit in the manner indicated.

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Entered at Rochester Post Office as second class mai

ROCHESTER, N. Y., MAY, 1899.

The circulation of GREEN'S FRUIT GROWER is larger than any other horticultural paper published in America.

EDITORIAL.

Don't Send Checks.

It costs us from 10 to 25 cents to collect a small check. If you send us a check for 25 cents it costs us half of the check to get it collected. So please send no check on your local bank for less than \$3 to \$5. Send P. O. stamps rather than checks. C. A. GREEN, Editor.

Wanted-A Girl Who Knows Nothing.

This seems at first sight to be a strange request. We have need of a young girl, but have found that invariably such girls know too much. They have not been teachable; they have been possessed with an idea that their way of doing things better than our way, and have instructed them how to perform cer tain duties, they continued for a few hours, or a few days, and then revert

Those who desire to be useful in the employ of other people, should aim to conform themselves to the wishes of their employers. It is well to be wise, and to know how to do many things, but if this knowledge unfits them for adaptation, or renders them unteachable, it is better to have those who know very much less, but who are willing to learn, and to consider

Trouble.

Correspondents of Green's Fruit Growe often ask for advice about moving to an other part of the country in order to mak a start in life. Our advice is generally adverse to such changes of locality. People of moderate means are seldom able visit these strange localities in advance of locating there, thus their knowledge of such localities is all hearsay and may be erroneous. If the husband is pleased with the new locality, it often happens that the wife is miserable there, does not like the surroundings, is homesick, or is attacked by disease, and must remove in order to

maintain her health or life. It is much safer for an unmarried man to move to a locality than a married man. 'Distance lends enchantment." We often imagine a distant point more attractive than our old home, but facts many times prove the contrary.

I have in mind a man who moved, with his young wife, to a prosperous town in the East, where he secured an excellent position, made money and was paying for an attractive home, and all went well with ohe exception; his wife was terribly afflicted with ague, and in consequence of this ague she gradually lost her eyesight, until now she is entirely blind. In order to save the life of this loved wife he was obliged to return to his old home.

This is a great misfortune to the man since he is not able to sell his home in the East at a fair price. He has been compelled to lose his position there, and finds it difficult to get anything like such a position as he had where he was. Had remained at his new home his wife could not have survived. Surely this young man is in trouble. His wife is opelessly blind, he is out of work, and his property so far away is of little value "A rolling stone gathers no moss."

one stays where he is well known, and well appreciated, his chance of getting work, or of bettering his condition should improve with each year. If he moves to some distant point, there are many contingencies which he cannot possibly fore

Peculiarities of Man.

I was told last night by a lady who has long lived in Palestine that everything there is almost precisely the same as it was in the days of Abraham, about 4000 years ago. The clothing worn there is the same. She said that Christ being a North Countryman, his coat was made with a peculiar seam, and such coats in that place are made with the same seam to-day. The coat of Christ was nothing like the coats worn to-day. It was made of camel's hair, and was part of a loose flowing robe that enveloped the form. It was a warm garment, worn in winter to keep the heat in, worn in summer to keep eat out, and was used at night as coverlet over the sleeping form. The same plows, the same houses, the

same cooking utensils, the equipments throughout, existed now in Palestine that have existed for thousands of years.

The women have the same peculiar man ners, and costumes, as did those in the days of Abraham, and the Bedouins have the same regard for their ancient code of morals, and the same disregard for human life, the same dependence upon robbery and plunder for a living in place of honest

The idea illustrated by this peculiarity of humanity to continue in old ways is that man drifts toward a certain culminative point, or condition, and then remains long in that condition, seeming to be almost unchangeable after a fixed state has been

China has been regarded as the oldes country. There was a time when she was he most progressive of all nations, and the highest developed in the arts and sciences. She is now in a condition of collapse, owing to the fact that her people have reached a fixed condition from which it seems impossible to change them

them. It would seem that man improves most when it is upheaved, disturbed and brought under peculiar new and exciting circumstances, and that man retrogrades most rapidly when he has been long subjected to the natural trend of circumstances undisturbed by outside influences

India is a nation composed of untold milions of people bound hand, foot and soul by the bonds of caste, by peculiar religious beliefs and by fanaticisms. The older the country the more the people would seem to be enslaved by old and effete ideas. England, France, Germany, Ireland, Scotland, and other like countries are more modern, and yet even these are less pro gressive and more warped and rutted than are the American people, or the people of Australia, or the people of any newer

The people of the United States, and of all new countries, are, and have been, undergoing periods of upheaval. That is, people from all the nations of the earth have been thrown into this country, and these mixed races have been compelled to struggle with one another fiercely in subduing the forests and irrigating the plains, in building great railroads, canals, developing all our forms of industry. During this period of turmoil all these mixed races have in a measure lost their hold upon their native forms and customs.

When a Western town is first organized the good people there are not classified. They are all as one, educated or uneducated, cultured or uncultured, Jew or Gentile. Briton or Pagan. They all come under one class, associate together, and all work for the common good. In this same locality fifty years later, you will notice a change. The educated have formed a society of their own, the wealthy have a society of its own, and the ignorant and untutored are of necessity left to hemselves, to amuse each other as best

Thus this country, which has so long boasted of its equal rights, is fast growing nto the social condition of older countries, and we will undoubtedly, as the ages go by, be the victims of caste, as they now are in India, or subjected to forms of ariscocracy as they now exist in Europe. In other words the whole trend of the human race seems to be to get into a rut, or a coutine of life, as are the people of Palestine at the present day, from which it is almost impossible to rouse them, except by some upheaval that changes their conditions and surroundings.

There are, however, mitigating conditions at the present time which may tend o prevent the tendency of mankind to degenerate, or to hold fast to the old forms, and these are the rapid means of communication between one part of the world and another, and the wide dissem-

The Migration of Birds.

The migration of birds has received the attention of ornithologists for many years, and has been an interesting subject. It has been known that birds migrated many thousand miles, nesting and feeding at localities on the earth often as far distant as the limits of the earth will permit from the spot where they spend the remainder of the season. But there is remaining much to be learned in regard to these migrations, and much has been learned re-

Thus an English writer states positive that there are many species of birds which cross the Atlantic ocean. Some of these birds fly at a speed of two hundred to three hundred miles an hour, often occupying little more than one night in cross-

ing the Atlantic. There are many birds which attempt to cross the Atlantic that invariably perish before reaching the other shore. It is not understood why they should attempt such perilous undertaking, unless by instinct they are expecting to find the lost Atlantis, a large tract of land which is supposed to have formerly existed above the surface of the Atlantic, but which is now sub-

merged. It was formerly supposed that the older birds lead the younger birds in their migrations, but it has recently been learned that they do not, but that the older birds begin their flights earlier, and that the younger birds migrate later by themselves, guided solely by instinct.

Birds in their migrations fly at grea heights, often as high as from one to three miles. Astronomers engaged in viewing the moon, or the stars, with powerful tele scopes often notice the flight of birds in the night, passing between the lens of the telescope and the object viewed. writer has often heard the quank of wild geese passing over his residence at midnight. Light houses along the Atlantic coast are often struck at night by migrating birds with such force as to destroy the

lives of thousands during a season There are still many parts of the earth where birds can nest and breed in seclusion, free from the attacks of man. Indeed, there are many places where man has never set his foot, and here the many birds migrate and luxuriate on the wild fruits which grow in abundance. Nevertheless all kinds of birds are becoming extinet (unless it be the sparrow), they have so many foes, the worst of which is man. It is not possible for them to increase as

fast as they are destroyed. It is a sad thought that the day will come when the earth will cease to be enlivened with the songs of birds. It seems to be almost impossible to create a popular sentiment in favor of sparing bird life. It would seem that our women would be the most susceptible to petitions for the protection of bird life, but this proves to have been a mistake. Women have been urged not to wear dead birds upon their hats as decorations, but still the practice is con-

tinned.

The Supervising Committee of the Exeriment Farm at Southern Pines, N. C., have just issued a very valuable and important work on "Plant Food." The book s well printed and handsomely illustrated with many fine pictures. It would pay farmers to read this book, which, we understand can be obtained free by sending to the Director, Experiment Farm, SouthWhat to Do When Swindled.

Subscribers sometimes complain that they have sent money to advertisers for new machines, new inventions, etc., and that the party receiving the money has not sent any machine, or given any satisfaction. Whenever you are imposed upon in this manner you should write, first to the firm you sent the money to, stating the circumstances and asking for immediate satisfaction: then if the firm does not give satisfaction, you should appeal to the United States Post Office Department at Washington, D. C., giving the name of the firm who has swindled you with full par-

The Post Office Department will not all ow any person or firm, to use the mails if they are conducting a dishonest business.

What to Do With Trees Partly Winter Killed.

The past winter has been one of the most severe that I can remember. Readers of Green's Fruit Grower from northern sections of the country report more or less injury done to fruit trees, especially thos recently planted. Those planted last fall are more apt to be injured than any other: The question is, what shall we do with trees in this section where the therm ter has gone 20, 30 or 40 degrees below zero, and where the wood of the trees is darkened, or the bark burst by severe freezing.

It is difficult for the writer to tell, with out seeing the trees, whether they are injured sufficiently to warrant the tons be ing cut off as far down as the wood seems to be injured. But where the wood or inner layer of the bark is darkened se riously it is probable that that portion of the wood is destroyed and should be removed before growth commences in the spring. In some cases it may be necessary to cut off the tree with a saw, within six inches of the ground, allowing the new shoots to grow up from the stub, only one shoot of which should be allowed to remain and form the tree. The superfluou shoots should be rubbed off as soon as they appear. Care should be taken that the shoots left to form the tree do not start up below where the bud, or graft, was in serted since in that case the shoot would produce seedling fruit, and not the budded

or grafted variety. It is surprising how readily and how soon a new tree can be formed from this single shoot allowed to grow, even where the tree is cut off close to the ground. Since there is a large supply of healthy roots the new growth is rapid, and but little loss, if any, will be sustained. Great care should, however, be exercised so that the trees are not needlessly cut back. Be very careful in your examination of the trees, and if possible get some expert to examine them to decide whether the injury is sufficient to warrant their being cu

In case of raspberry or blackberry canes being injured by the winter, the worst that can result is the loss of the present season's crop, since new canes will be thrown up the present season for the suc ceeding years' crop. It is not necessary to cut back such canes of raspberry and blackberry canes until the growing season has commenced, and the canes have been proved positively to be destroyed.

We have yet to learn of a section of the country where the Loudon raspberry has been injured by the past winter. We hear of many localities where all other red raspberry canes were destroyed, but the Loudons are in perfect condition. There are few hardy red raspberries. Pre vious to the Loudon the Turner was the only red raspberry whose canes were perthrough ordinary winters at Rochester without protection, but the past winter Cuthbert raspberry canes have been frozen back by the winter, although the thermometer has not been lower than 10 degrees below zero at Rochester, N. Y.

No fruit trees, and no trees in nursery rows have been injured about Rochester. N. Y., during the past winter. It would seem, therefore, that Western New York may yet be considered a favored locality for orchards and nurseries; even the peach buds at Rochester, N. Y., were not injured by the past severe winter.

> Apples at Five Dollars per Barrel.

We have during the past two years ex perimented with keeping apples in cold storage warehouses, constructed on the most improved plan, such cold storage warehouses as are to be found now in nearly all large cities. These warehouses usually charge 15c. per barrel for the first month, 10c. per barrel for the subsequent months. In large quantities doubtless lower rates could be secured.

On the seventh day of last November we out into the Rochester Cold Storage house several barrels of Spy and Baldwin apples. each apple being carefully wrapped in pieces of newspaper, and packed in as ightly as possible in layers, the head being forced in with considerable pressure.

It has long been known that paper round fruit tends to protect it from changes of the temperature, and from germs of decay, and at the same time prevent injury from an occasional decayed fruit, should such occur. It has been feared by some that any paper which has been printed, like newspaper, would be objectionable in wrapping apples, since it was feared that the ink might influence the quality of the fruit. This season's experience convinces us that the ink is not objectionable, the apples being of the finest quality, the varieties being Spy and Bald-

We have been eating these apples for the past four weeks and find them in perfect condition, almost precisely in the same condition as when put in the cold storage house last fall. We have not found the first rotten specimen, or the first speck of rot in any one of these apples. So far as we can judge from past experience, it seems probable that these apples wrapped in paper would keep safely until June or July, perhaps longer. One barrel not wrapped in paper had a few rotten apples. We inserted a small advertisement in Green's Fruit Grower, offering these apples for sale at five dollars a barrel. gentleman in Detroit, Mich., ordered what we had to spare, desiring fifty barrels. About the same day, but a trifle later, parties in this city offered to take these apples at five dollars per barrel, to sell upon

fruit stand. It would seem to be exceedingly profitable for the apple grower to take great pains in cultivating and spraying his orchards so as to secure the finest specimens Then to select at the time of picking perfect specimens, perfect in color as well as in size, and especially free from defects, wrap each specimen in paper, thin manilla paper preferred, cut into eight-inch square some printer who can do it rapidly and cheaply, and place this superior fruit in cold storage for a fancy market in April and May. It is my opinion that a strictly fancy grade of apples thus packed could be sold almost any season at a highly profit-

Apples wrapped in paper will endure

A Visit to Dolph Porter's.

on account of being wrapped in paper, The old homestead where I was born and where I lived for many years, was against freezing. There is a demand for two miles from the nearest village and such fancy fruit in almost every large city, was somewhat isolated, there being no very near neighbors, and yet it was a ington being a point of distribution for beautiful spot, located on an elevation commanding a fine view of the surrounding country. I desire to express somewhat the feelings of a boy living in such a se-In the fall of 1897, a season of great cluded place, and his desire for a change surplus, we put in cold storage a much of scene and surroundings, which feeling larger quantity of apples packed in barrels are not probably appreciated by older rectly from the tree, without sweating. In

As a child I had but little to do but to amuse myself. As you may imagine, soon became familiar with every object about the house and garret, the yard and garden, the barns and orchards, the woodlands and the fields. It does not take an active boy long to exhaust the curious and nteresting places about his own place. Having repeatedly enjoyed the surroundings of my own home. I longed for other and fresher fields of interest.

Our neighbor had a boy by the name of Dolph Porter. On rare intervals my pacents allowed me to visit this neighbor, and these gave me great delight. Everyhing at Dolph Porter's was new and strange to my boyish eyes. Dolph Porter had a strange yard, a strange garden with strange vegetables, and a strange house with strange furniture, and strange women presiding over it. There was strange woodshed and a strange woodpile, corded up in a novel manner. There were strange barns filled with strange cattle, strange horses, strange chickens, ducks, geese and a strange peacock. The fields and the outlook, generally, were new to me and delightful. Indeed, I seemed to breathe in the air of a fresher world

when I visited Dolph Porter's. My neighbor had discovered methods of diverting his mind, which were new to me. New ideas in bows and arrows, slingshots, traps, carts and other devices, in which boys take delight.

On the Porter place was a dark and mysterious timber tract which I have alluded to before. Here was another traction. In this tract was the abode of many squirrels of various colors, and of the raccoon. Here the hickory-nut flourished, and in the surrounding field the black walnut and butternut.

But perhaps my greatest delight in visiting Dolph Porter's was in gathering chestnuts, for which his farm was famous. Our farm, only one-half mile distant, had not one chestnut tree on it, while Dolph Porter's had many.

The earth has never seen such sweet chestnuts as grew upon Dolph Porter's farm. Since my parents seemed averse to my visiting my neighbor I cannot remem ber that I ever arrived at his place when the chestnut crop was at its best. The trees, as I remember, had always been whipped previous to my coming, and the chestnuts mostly carried away. But I enjoyed the hunt for the few we did secure, and if I went home with a few lozen nuts rattling in my pocket, in addition to those I ate, I considered myself fortunate. It is surprising how much climbing at risk of life and limb, how much stoning, clubbing, and chasing about from one part of the farm to another, a small boy will do to get a few

I trust that parents who read these ines may be charitable to their children who desire occasionally to visit strange scenes. The minds of children differ from those of grown people. Childish minds are confined to the limitations of the home grounds, whereas the minds of older people are occupied with books, and with a wide range of thought and subjects. If we cannot remember our desires and feelings as children we cannot treat our chil dren with proper consideration.

Shall We Use Our Wives as Well as Our Horses ?

As a rule farmers' wives are overworked. While it is granted there are few men who desire their wives to exhaust themselves with labor, when we stop to think of it she does not get as much rest as our horses.

The farmer's wife is out of bed and hard at work three hours before the horses are hitched to the plow. Previous to seven o'clock the horses are in the stable eating and resting.

At twelve o'clock, or a little before, the horses are brought to the barn, again fed and watered, and have at least an hour's rest during which time the farmer's wife is waiting upon the numerous men and

members of her family at her table. At six o'clock the horses are again brought into the stable, after which they do no more work that day, and yet what farmer's wife stops her work at six o'clock? In place of stopping her work then she continues often until eight and nine o'clock in the evening.

On Sunday the farm horses rest, but it s usually the hardest day of the week for the farmer's wife. She must do the usual amount of cooking, goes to church, dresses the children, and usually has a Sabbath school to teach.

What farmer would consider for a mo ment the idea of working his horses twelve and fifteen hours a day without rest? No one would expect his horses to endure such a strain, but the good wife often works from five o'clock in the morning until bed-time, most of the time standing upon her feet, and exposed to the over heated and vitiated air of the kitchen.

The farmer is not so hard worked as his wife. It is seldom that he does much work before breakfast. He has his hour at noon, and when the evening bell rings his work usually stops. His good wife works four or five hours each day longer than the husband. Now, the most important question

all comes up for consideration, and that is, what share of the profits of the farm enterprise does the wife receive for her long hours of work and over-exertion; Most farmers' wives receive but little, if any interest, but has to almost beg of her husband whatever money she receives at his hands, not only for her own clothing and other expenses, but for the clothing of the children and some of the supplie of the house. This is all wrong. It is unpleasant for any person to ask another continually for small sums of money, such as are needed for regular expenses.

The men employed at Green's Fruit farm were formerly paid at the end of the year, except such sums as they might call for occasionally as they had need of it to supply their daily and weekly wants. discovered that it was disagreeable and often painful for these men to have to ask for this money, which was really their due; therefore I decided to pay them in full each week, and I am sure this pla pleased them better than the old plan, and which is just as good for me.

My wife never asks me for money. has the key of the money box and helps herself as she has need. I have no fear that my wife will be extravagant in her expenditures. She has worked as hard as I have, and in many ways is a partner. and should not be compelled to ask for that which is rightfully her own. Think of these things, farmers, and see

what you can do to make the life of your

wife more enjoyable and less wearing. Possibly some husband will read these lines who possesses more feeling than or dinary; his wife may rest more than his horses. If on careful consideration he comes to the conclusion that this is the case, this article does not apply to him. But those other readers whose wives do not get the rest which we concede is necessary in order to sustain life and full vigor, kindly read these lines with reflec-

The Bath.

I find the word bath used but once the Bible. The ancients were not given to bathing, but away back into Egyptian antiquity bathing was used as a religious rite. Later this religious rite is adopted by Moses, also in Greece, and by many other nations.

The Romans carried bathing to the great est excess, apparently not with the idea of ecoming clean so much as for the pur pose of whiling away idle hours.

At the pool of Bethesda there was often gathered a motley throng, troubled with all manner of disorders, who came thither believing that a bath in this pool at certain hours would bring them relief. Doubt-less many of these people went away without being cured by the bath, but it is probable that many of them would have been benefited by any bath at any hour, and under almost any circumstances.

It has been noticed that the ancients knew but little of medical science. They certainly knew but little about the efficiency of water as a bath and as a drink for disease. Indeed, the people of this age are but just learning the value of water. There is not one person in a thousand at the present day who realizes fully the value of water as a cure for disease.

People are beginning to resort to the various mineral springs in this and other countries for bathing, and also for drinking. They report great benefits from baths. Physicians tell me that they do not discourage people from going long distances for the purpose of bathing in mineral springs, or to drink their waters These physicians know that what their patients need is water, pure water, but if they can be induced to drink, or bathe, by supposing that the water has medical vir tues aside from its natural character, so much the better, but the physicians tell us that pure water is good enough for drinking and bathing.

The arm that I raise to grasp your hand at greeting is composed of 80 per cent. of water. I fancy that I have a pretty solid head, but this head of mine is composed of 80 per cent. of water. Our entire bodies are 80 per cent. water. When we consider that water is constantly evaporating from our bodies, why should we not be convinced that drinking water must be nelpful. A glass of water is often as stimulating as a glass of wine, or other spirits. Without an ample supply of water in the body the blood in the veins becomes sluggish and flows with difficulty.

There are five miles of pores and tubing thereof in the human body. An inch of skin on the human body may contain a thousand pores: each pore has a valve which may open and close independent of individual will. These pores of the human body are greater excretory organs than any other in the body, greater than the kidneys, liver or bowels. The work of these other organs named may be stopped for several days, or weeks, without death, but if you close all the pores of the body for an hour it would destroy your life. It has taken the human race a thousand

or eight hundred thousand years, as the case may be, to learn the value of bathing and of drinking water. Indeed, the race has not yet learned this valuable lesson. I to a commission man. Grade your stand before you a sick man, cured by bathing and drinking water.

Reforms Not Welcomed.

The human family seems naturally in clined to get into ruts, and disinclined to get out of them. Reformers are seldom popular, and have to work against the tide of public opinion.

My attention is called to these facts by review of the life of John Wesley, the founder of Methodism. During his age the spiritual condition of the Church in England was at a very low ebb. Abuses had gradually crept into the church sysem, but little good was accomplished, and the condition of the people was alarming.

Wesley was a graduate of Oxford Colege. He was not marvelous as a theologian, or as an original thinker, but he had peculiar ideas about lifting up the common people, and making the world bet-In order to accomplish this object he established methods which had never been heard of before, by which every individual should receive attention, and advice, and censure if necessary. In derision the peo-

ple called him a method-ist. He started out without a church, and without any backing, expecting no pay for what he did, except it be the reward of well doing. He began preaching in the streets where he was hooted at, pelted with stones, kicked and hit with many clinched fists. During one day a stone hit him between the eyes, another stone hit him in the mouth, and a strong man hit him in the stomach with his fist. Some times he would be chased by a mob through the streets. But he would continue preaching to them while they were beating him, and abusing him; sometimes endeavoring to escape through the open loor of a strange house, but the owners thereof would not allow him to enter, fearing the mob would tear down, or burn, their house. Later on his street sermon would be interrupted by the beating of drums, kettles, or the playing of bands of music, brought thither simply to inter ere with his preaching. This wonderful man continued his work

in spite of all the obstructions placed in his way, and created one of the greatest religious reforms ever known, benefiting his fellowmen to a remarkable degree, and establishing a church, which, at the very least, has accomplished as much as any other church organization the world has We all need reforming. Not only are

reforms needed in churches, and in religion. Reforms are needed in our diet, in our manner of building houses, in ques tions of ventilation, of exercise, of the training of children, of our reading, and our methods of life generally, We are living in a wonderful age, nearly

all the great inventions having occurred during the lifetime of our older people. In order to keep pace with these marvelous changes, we must continually reform our methods, and re-adapt ourselves to new conditions. We should all be possessed with the idea that it is possible to better our conditions in life, and we should be open to conviction on every side. He who s not open to conviction, or to ideas of eform, cannot hope to advance and to be enefited by the larger experience, and larger wisdom of specialists in various ines of human thought and effort.

AMERICAN FRUIT GROWING the ewest book by C. A. Green, handsomely llustrated, 130 pages, devoted to Peach Culture

The Marketing or Profit End of Fruit Raising.

Read before The Western N. T. Hort. Society by Olive Troth, Camden, N. J.

For obtaining best results in fruit grow ing it is as important that you should end right as it is that you commence right. Growing the crop is but the first half of the battle. It is that which you get on of it that determines the profit. It is the result of the last half of the battle that decides success or failure. The marketing of a crop is as much of a business a the growing of it. Some few men can ru both ends successfully-some only or while others neither. If you are not in position to manage the other end, it pay you to get some one who has sho by experience that he can.

The question whether the grower should sell or consign his fruit to a commiss man to sell for him, depends upon circur stances. If he is offered as much or me than it is worth he should sell and get th cash. If he does not know what it worth he should at once inform hims by the market reports in the daily paper allowing for transportation and charges, or his commission man will glad ly inform him what the market is. If the grower is in need of the money for taxe or other expenses—then it is not a ques tion of want to, but must. Buyers fir this out about as soon as anybody.

The old saying that "the fool of family had brains enough to be the fa mer," has long been proven false. Wil new and improved methods of production with numerous new insect enemies an unheard of fungus diseases to combat, takes brains, intelligence, constant stud and mature judgment, to successfu grow a crop now. The "fool of the fa ily" has no place at the head of a far With distance almost eliminated by fa freights and refrigerator cars, competit has become serious. No one section any longer control the markets. It quires keen foresight, mature judgme long experience and a thorough knowled of the business, to successfully market crop, and plenty of times all these rec sites will not do it. What chance ignorance in the contest-except chan All things being equal, the nearer grower can get to the consumer the bet will be the prices obtained. If it we possible for each fruit grower to directly with the consumer, and he w as well up in the knowledge of selling he is in growing, it would materially in his cash account. Mr. L. B. Pierce, Ohio, has been telling the producing we for years through the agricultural prohow he sold his berries for ten and tw cents a quart in a market glutted wi four and five cent fruit. But Mr Pic had two advantages over the averfruit grower. First, he was near a g local market; and second, he had suffice business qualifications to know when sell and when to hold. He studied customers-the profit end of fruit rais

as well as the growing part of it. There is no "Royal road to success the selfing end. From the quantity of fruit, badly assorted stock and indisc inate sized packages received on the ket, but few have learned that road success in the growing end-if there any. The ONE thing I would imp upon every grower is "do not attemp sell anything you would not want to yourself." You may be able to fee buyer once, but you cannot do it all Put your goods up straight, hav your packages neat, clean and uniform and plainly marked, and it will pay yo whether you sell to a local buyer or and so mark it, rem cilling a thing "fancy." make it so. Ship only the best. as much to send a poor crate of be or barrel of apples as it does a good but the profit is not there and that what we are after. Good fruit will no sell poor, but poor will often stop the

of good, and always has a demorali tendency on the market. The time when "anything will sell" past. The best fruit carefully grad honestly put up in neat, clean, attract packages, marked true to name and grad has and will hereafter drive poor, assorted fruit in irregular or mon packages out of the trade. This is par the secret why the Pacific Coast, three thousand miles away, is driving you o of your market at your very door. stronger competition becomes the more telligent business methods become ne sary both in production and distribut Haphazzard and shiftless methods m cease at both ends of the line or pro will become extinct. If you want buy profits you must guard your reputation come in, but nine time a grower and shipper with the atm care. As soon as your mark become synonym of straight goods, honestly up, reliable and true to name, you are a position to get best results for your lab and care. Many wholesale jobbers pre to buy from a regular dealer in prefere

to purchasing from the grower, because the dealer, if he wishes to continue in h iness and hold his trade, will be more t likely to pack his fruit straight. While grower, recognizing no such business t sons, is more apt to "put it up to sell If possible the grower should follow fruit to market occasionally, without ting his commission man know it. He then see how his fruit looks in co tion with others. The chances are he be disappointed. He then also has chance to see if his selling agent stands his business and is looking af the growers' interests as well as his Have confidence in him or drop hi he knows you are trusting him he will his best to keep your trade. He will sho your products to his best custome if your fruit comes regular and is representation, it will likely not be before your fruit will be sold "upon rival." This is particularly true of ries and peaches. The commission ma in better position to know the market th the grower. He is also in a better tion to know where consignments placed to best advantage. He is with his own and surrounding market the time. That is what he is there Do not hamper him with such inst as hold for a certain price. If you do trust his judgment of the fruit and ket, do not ship to him. If he is a s cessful business man he likely than you to know what is the be thing to do under the circumstan he does not know a year or two will d

him out of business. To whom shall you ship if you sell, is a question each shipper must solv for himself. I would not advocate ship ping to a new house unless I perso knew something of their business cations. There are plenty of good ho in all the large cities; a few poo also, but these are getting crov more and more every year. Almost a house that has weathered the finance storms for five years is fit to be tr with your consignments. They all nize that your interests are theirs. should be a good understanding and tual confidence between the grower and distributor at all times for the mut advantage of both.

s the R

MAY

WOMEN'S D "The hand that

rules the wor The History of

Written for Green's l Dicks
We trace them quite
And Eden's garden f
We read about the g
First blessed with na
And beauties charmin
Then gayly dressed in
Since sampling those sampling those long, ere Paris Long, long, ere Par Were figleaf fashion and there as new-bo Began the fashionable se (fruits) are sti By greedy youth in a Note how, in Webster The cunning rogue the But only got returns in Now Adam didn't can Now Adam didn't can About the subtle serp Him smooth harangue But Eve was very li And so she ate, then While in his throat w From Eden barred, the From Eden barred, they must leave Received in lieu a grow that was not a n The round, big world Well stocked, no foe they settled on the thand soon began their

Wrin

ONLY A WOMA

April might well month," for the avera such piles of work those ugly little mark idly around her eyes. cars reveals in your f a set of care-worn, wo

and men, too, that face seems like a glin cloudy day. care-worn woman to one do with three chi and not much money hired women never do and yet, this woman take a dose of the do But here is that drea Because you have a good health, that ha

cleaned before the fir reason why you shoul "Cut your garment cloth," is a plain, "Hasten slowly" is an day go over the clos rooms. Never attemp day, and if it can possi let the extra cleaning hour. One of the mos keepers said she stre over the whole year. "I put to rights as I stance, if my little gi calico to make her dol over my piece basket to

put them all back in a found it." That is a v go by, "One clean Bet ozen cleaning Betties. "I can do everything one very successful ho over in my mind what while I am dressing in to be very careful not t Of course, sometimes

carry my work through It is this attemptin makes the wrinkles. No must drive them out by attempting to do too mi THE PAR When the new woma

doubt if there will be

now understood. This

erally the most sunny, views from the window beautiful things are religion out worst of all, the closed and the sun try every crack, is shut out son. The children are cross the threshold and lonely air to the room gloomy, even if it is things. Generally there path at the side of the h and children never thin sacred portals of the doors. There will be n this spring, and a word to have a parlor, especially one. The best room in t prettiest furniture and or oo good for every-day us form a child's mind muc can dream. Now and the broken, or doors stain tle fingers, but this is a paratively. If wife and he parlor and want pape more likely to change his hair and spend a ple his family. And the visi Who has not been ushed these closed-up rooms an utes making a formal when the duty is perfe hrough the partly-opened augh of a child or a trill pird, but these are all he real family life. Do of such formal callers

hers" will come natural to friends will enjoy a peep BEST OF A

"I wish I was a favorite oung girl to me. "But rions don't come my way vi real dowdy and is

friends into your home ar

with yourself, even if Ja

scattered over the floor an

ander the table. It may

ork to tidy the living ro

children's faces clean, but

the kaper

for the Famil

WOMEN'S DEPARTMENT

"The hand that rocks the cradle

The History of Some Ancient

Fruits.

Written for Green's Fruit Grower by E. P.

Written for Green's Fruit Grower by E.

Dickerman.

Dates are of old, it so appears,
We trace them quite six thousand years.
And Eden's garden fair is where,
We read about the great first (pear);
First blessed with nature's eloquence
And beauties charming every sense;
Then gayly dressed in summer suits,
Since sampling those forbidden fruits.
Long, long, ere Faris ruled the roost
Were figleaf fashions introduced,
And there as new-born nature smiles
Began the fashionable styles.
Those (fruits) are still in great demand
By greedy you'fn in all the land.
Note how, in Webster's spelling book,
The cunning rogue the apples took.
The farmer pelted him with grass,
But only got returns in "sass."
Now Adam didn't care a fig)
About the subtle serpent prig;

Now Adam didn't care a (fig)
About the subtle serpent prig;
Him, smooth harangues did not perplex,
But Eve was very like her sex
And so she ate, then Adam more,
While in his throat was lodged the core.
From Eden barred, the hapless pair,
Since they must leave the garden fair,
Received in lieu a goodly (plum).
Now that was not a money sum;
The round, big world was all their farm,
Well stocked, no foe to do them harm.
They settled on the thorny plain
And soon began their raising Cain.

ONLY A WOMAN'S THOUGHTS

Wrinkles.

Written for Green's Fruit Grower by our

regular correspondent, Sister Gracious.

April might well be called "Wrinkle

month," for the average housekeeper sees

such piles of work outside and in that

those ugly little marks increase more rap-

idly around her eyes. A ride in the trolley

cars reveals in your fellow travelers such

a set of care-worn, worried looking women

face seems like a glimpse of the sun on a

cloudy day.

nd men, too, that one cheerful, bright

"It is easy to say, don't worry," said a

care-worn woman to me, "but what can

one do with three children, a dirty house

and not much money to live, and these

hired women never do anything properly.

And vet, this woman is the very one to

take a dose of the don't worry medicine.

But here is that dreaded house-cleaning.

Because you have a smart neighbor, in

good health, that has her whole house

cleaned before the first of May it is no

"Cut your garment according to the

cloth," is a plain, but useful adage.

"Hasten slowly" is another. Some warm

day go over the closets and little used

day, and if it can possibly be helped, never

let the extra cleaning go over the dinner

hour. One of the most perfect of house

keepers said she stretched her cleaning

over the whole year. "But," she added,

"I put to rights as I go along. For in-

stance, if my little girl wants a strip of calico to make her doll a dress and pulls

over my piece basket to find it. I make her

put them all back in as good order as she found it." That is a very good maxim to

"I can do everything by planning," said

over in my mind what ought to be done

while I am dressing in the morning, trying

to be very careful not to lay out too much.

come in, but nine times out of ten I can

carry my work through, according to the

It is this attempting too much that

makes the wrinkles. Now then, we women

must drive them out by planning, and not

When the new woman plans the home

doubt if there will be a parlor, as it is

now understood. This best room is gen-

erally the most sunny, with the prettiest

beautiful things are religiously kept there,

but worst of all, the curtains are kept

closed and the sun trying to get in at

every crack, is shut out, as if it was poi-

son. The children are seldom allowed to

cross the threshold and there is a shut-up,

lonely air to the room that makes it

gloomy, even if it is filled with fancy

path at the side of the house and husband

and children never think of crossing the

sacred portals of the front and parlor

this spring, and a word to the brides, don't

have a parlor, especially if it is a shut-up

prettiest furniture and ornaments are none

too good for every-day use. A picture will

form a child's mind much more than you

can dream. Now and then some vase may

e broken, or doors stained from dirty lit-

le fingers, but this is a small injury com-

paratively. If wife and children are in

he parlor and want papa to come he will

more likely to change his coat, brush

hair and spend a pleasant hour with

family. And the visitor enjoys it, too.

these closed-up rooms and sat a few min-

utes making a formal call, glad enough

when the duty is performed? Perhaps

ough the partly-opened door comes the

but these are all you can hear of

real family life. Don't have a long

of such formal callers. Let your true

riends into your home and have them sit

ith yourself, even if Jamie's blocks are

ander the table. It may be a little more

alldren's faces clean, but "company man-

ads will enjoy a peep into your home

I wish I was a favorite," said a bright

ang girl to me. "But nice little atten-

don't come my way very often. There

real dowdy and is a clerk at the

ennie Jones, not handsome a bit, and

hers" will come natural to them, and your

BEST OF ALL.

Work to tidy the living room and keep the

ered over the floor and Mary's doll is

ugh of a child or a trill from the canary

has not been ushered into one of

The best room in the house, and th

There will be new homes started

things. Generally there is a well-worn

views from the windows, and the most

attempting to do too much in one day.

THE PARLOR!

lozen cleaning Betties.

Never attempt too much in one

reason why you should do the same.

rules the world."

ting or Profit End of ruit Raising.

estern N. T. Hort. Society by Oliver oth, Caniden, N. J.

g best results in fruit grow portant that you should end that you commence right crop is but the first half of is that which you get ou nines the profit. It is th last half of the battle that or failure. The markets as much of a business a it. Some few men can run ccessfully-some only one ither. If you are not in a nage the other end, it wi some one who has show that he can.

whether the grower should his fruit to a commis him, depends upon circu is offered as much or mor h he should sell and get the loes not know what it i ald at once inform himse reports in the daily papers transportation and commission man will glad what the market is. If the eed of the money for taxe ses-then it is not a ques to, but must. Buyers fine

as soon as anybody. ing that "the fool of the ns enough to be the far been proven false. With oved methods of production new insect enemies an igus diseases to combat. intelligence, constant stu judgment, to successful ow. The "fool of the fan ace at the head of a farm almost eliminated by fa efrigerator cars, competition No one section ca ntrol the markets. It esight, mature judgmen and a thorough knowledg to successfully market ty of times all these rem do it. What chance ha the contest-except chance eing equal, the nearer th to the consumer the better rices obtained. If it wer ach fruit grower to dea he consumer, and he wer he knowledge of selling a ing, it would materially te unt. Mr. L. B. Pierce. telling the producing wor ugh the agricultural pres is berries for ten and twelv n a market glutted wit ent fruit. But Mr Piero antages over the averag First, he was near a go nd second, he had sufficie to hold. He studied profit end of fruit raisi growing part of it.

'Royal road to success" From the quantity of po orted stock and indiscr kages received on the in ave learned that road growing end-if there NE thing I would impres ower is "do not attempt u would not want to u may be able to fool : at you cannot do it all the goods up straight, have neat, clean and uniform arked, and it will pay you n man. Grade your f remembering that sto hip only the best. It cos end a poor crate of berri is not there and that fter. Good fruit will neve always has a demoralizi e market.

hen "anything will sell" est fruit carefully grade p in neat, clean, attractiv hereafter drive poor, in irregular or monk of the trade. This is part the Pacific Coast, thr away, is driving you o ss methods become nec duction and distribution nd shiftless methods mus ends of the line or profi guard your reputation a shipper with the atmo as your mark becomes aight goods, honestly pi true to name, you are regular dealer in preference wishes to continue in bu his trade, will be more than ing no such business re upt to "put it up to sell." he grower should follow h occasionally, without le sion man know it. He ca his fruit looks in compe The chances are he He then also has if his selling agent under

less and is looking after nterests as well as his own e in him or drop him. are trusting him he will o your trade. He will show his best customers, and mes regular and is up will likely not be lon it will be sold "upon a s particularly true of be The commission man n to know the market tha He is also in a better posi where consignments can nd surrounding markets a him with such instruction certain price. If you do no p to him. If he is a sucman he will be mo to know what is the bes er the circumstances ow a year or two will dri

a each shipper must solv would not advocate ship of their business are plenty of good hou are getting crowded every year. Almost weathered the financia years is fit to be trus ignments. They all interests are theirs. The e between the grower and FREENS FRUIT GROWER When she is at a party she always has two or three devoted young men around her, and the rest of us are left out in the

cold. How does she do it?" "Next time you meet her," said I, "watch her and report to me." I thought a quiet discovery on her own account would do more than all my advice, so when my young friend came again I asked: "How about Jennie Jones's secret. Have you found it out?"

"I think so," she answered, "but let me tell you about the party. You know the Mortons are high and mighty-feeling folks, but Jennie is often present at their so ciables. She seems to do always the right thing at the right time. Her voice is low and clear, and she never insists on having her own way, at least openly, but the sly puss always gets it in some quiet fashion. When Grandma Morton came into the parlor she pulled a rocking chair right in among the young folks and led the pleased old lady right to it. Not only that, but for a few minutes she brought grandma into the conversation. Bashful Joe Swales was there that colors up whenever a girl speaks to him, but somehow Jennie, instead of laughing at his stuttering way, got him to talk about dogs, his favorite topic. There was a bashful young girl from the country that was a most decided wall flower, and if Jennie didn't get her on the floor to dance a quadrille, with the best young man in the room and didn't he catch on to Jennie's idea to make the girl have a good time and talk to her like a house afire. But the best of all was to see Jennie dance with that awkward Joe Miles that is always getting his feet into everybody's way and managed to step on the skirt of her dress and tear the gathers out half round. Jennie smiled, and actually led that boy to believe it was the best and funniest thing that could possibly happen.

has what you call tact!" "That's it," said I, "and you will find it serves you better than brains, beauty or even wealth.'

I believe he was almost ready to propose

to her on the spot. I tell you, Auntie, she

AN INTERESTING FAMILY. For fascinating ugliness give me a cac tus. No window shelf is complete without at least one of these patience provokers. I had a rastratus (by-the-by, the more ugly they are the worst sounding names are tacked to them). I gave rastratus house-room for seven years and he sprawled and grew more homely every season until I was out of patience with him. and before starting on a summer journey threw him behind a fence, on a refuse heap, and forgot him. On coming back in September I saw something red among the broken pots and pans and pulled out rastratus with magnificent wine red flowers. He was put back on my shelf where he will probably rest on his honors for another seven years. It is worth while to try to bring a night blooming cereus to flower, even if it takes ten years. Our German neighbors knew how to arrange a good time, and having a grandiflora, sent out cards of invitation inviting their friends to the opening. The plant stood in the centre of the room on a small stand, and the flower was so magnificent, our voices were subdued, as we were in its presence, as if it was a royal messenger Beyond was the dining room, where a repast was prepared. One of the most curious specimens of this interesting family is the old man. He has a round head, completely covered with long, grey hairs, giving him a very dignified and reverend appearance. I used to smooth the locks of mine with a hair brush, and he presided over my plant shelf like the gravest of deacons. I kept him for seven years and one morning found him lying across the ower not dead from old age and in creasing infirmities, and we buried him with appropriate ceremonies under the lilac bush. A collection of cacti can be made easily by exchanging with your friends. They bear a journey in the mail bags nicely and that cannot be said of all plants. As for treatment, let them alone They will grow when they want to, and i they don't choose, you may water them with your tears, and it will not avail

Cleaning Windows.

Sometimes they are too ugly to die. Mine

have lived through 15 degrees below zero

nights when the base burner fire failed and

almost everything on the shelf went under

go by, "One clean Betty is better than a Editor Green's Fruit Grower: If any woman is compelled to do more work than she has the ability or inclina one very successful housekeeper. "I run tion for and is constantly on the lookout for the easiest ways that will give perfect satisfaction, she will find my way of cleaning windows very easy. Of course, sometimes serious hindrances

I purchased 5 cents worth each of liquid ammonia, Spanish whiting and rotten rock and put in a jug with one gallon of rain water. I keep this in the kitchen where t is handy and when the windows begin to look dingy take a small cotton cloth (knit goods is best), wet with this fluid. shaken thoroughly, rub the windows with t, and when dry, polish with a soft woolen cloth. I usually clean five and often seven windows with this cloth without rewetting, then rub the lamp chimneys with it before burning it or putting it into water to clean for another time.

This fluid will clean paint admirably, as well as brighten brass, tin and silver. Used style, having twenty-eight servants, and on glass dishes it will satisfy the most scrupulous housewife, and will quickly give the desired polish, almost to brilliancy, with but little expenditure of energy. is so cheap that it is within the reach of all, and a gallon will last a long while. 'Tis very helpful in house cleaning time for paint sometimes is hard to clean, and this works like a charm. If you have never tried this do so and you will be pleased with the results.-Katherine Allerton.

The Nameless Charm.

"The first essential to pleasing is not, as it has often been said to be, a desire to please, but a desire to make your companion pleased with himself," is the posi tion taken by Florence Hull Winterburn when discussing "The Gift of Personal Charm" in the Woman's Home Com-

"What pleases us gains an ascendency over us, and nothing really pleases that has not some relation with ourselves, something in common with us, and drawing us on to a better opinion of our own merits than we had before. For one of the supreme desires of human nature is to see itself graciously reflected. A man endears himself in proportion as he shows kitchen maid. that he is guided by the motives and opinions we understand and like, only carrying them out more agreeably and successfully than we are competent to do. So it appears that the secret of the personal charm that makes some men and women delightful is not marked superiority, but flattered like ness to ourselves. Whether we imagine the likeness or whether it really exists is no matter so that the illusion is brought about. And the ability to bring it about belongs to the nature that is gifted with power to divine the feelings of others, and sympathize with them. To be 'sympatica' is better than to be beautiful or talented A certain apparent subordination of self

handkerchief counter of Brown & Co. Many Households of Millionaires That Cost a Fortune Every Year in Hire of Servants-American Luxury vs.

European.

Those of Green's Fruit Grower readers who wish that they were millionaires, will do well to read the following from Rochester Democrat and Chronicle, since when they come to realize that they would have to employ from twenty to thirty servants, indoors and out, and that the wife and husband must have the management of these servants, I think our would-be millionaires might be contented to remain just as they are, plain, every-day citizens. My wife sometimes has enough to do to manage one servant. I do not know what she would do if she had twenty.

To care for his family of two grown peo ple and two juniors. Mr. Vanderbilt maintains a staff of twenty-four indoor house hold servants, to wit: a steward, who has charge of all supplies, as his name implies; a butler, who is in truth "bottler;" a chef, who is a valuable "cordon bleu;" valets, footmen; a housekeeper at a salary that would make many a poor clergyman with countless children, feel himself at peace with Dame Fortune; ladies' maids, housemaids, parlor maids, chambermaids and seamstresses. Then at the stables are coachmen and grooms galore. It is a fixed rule in this establishment that none of the staff of servants from housekeeper down shall venture to address any remark whatever to the mistress of the house, unless first addressed by her. Any violation of this rule is cause for immediate dismissal. When the Vanderbilt family moves from the New York palace to the Newport palace, the Breakers, the travels from place to place, as has been frequently necessitated of late by Mr. Vanderbilt's broken health. the housekeeper with a staff of servants precedes them, and if going to a hotel, rearranges or, if she thinks best, refurnishes the suite of rooms so that the family on arriving find themselves surrounded at once by their own servants and their own belongings.

A still more extravagant household than that of the Vanderbilts, is the one maintained at Blind Brook Farm in Westchesas a successful exhibitor at the horse shows. True, Mr. Story keeps up but one "grand menage," while many of the nabobs keep a town house and several coun-

Mr. and Mrs. Story have no children, so that their establishment is for themselves alone. Here is the roster: Indoor servants: one housekeeper, a first ladies' maid, a second ladies' maid, a cook and kitchen maid, a parlor maid, a first and second housemaid, a seamstress, two laundresses, two butlers and two second men.

Outdoor servants: Coachman, three grooms, a florist and two assistants, a farmer and four assistants, a carpenter, who also has charge of making the gas; a furnace man. In addition to this, whenever there is any real work to be done, outside help is hired.

Another of those with recently acquired wealth are making a bid for social honors, is Joseph Stickney, who has recently bought a handsome residence adjoining that of William C. Whitney. While not so ambitious as some of the others, this become the happy possessors of the desired family of two childless people maintains piece without money and without price, a staff of twelve regularly installed in- at least I have done so. door servants, with two more to come in as required and do the heavy work. Of is tough and will wear well), pasted the

The stipends paid to the household staff | The Decorative Possibilities in | hired in every farming district. The imin such establishments range from \$200 a month, paid to the stewards or managers to \$20 a month for the kitchen maids. The total is near \$2,000 a month.

There are other positions in the families of these rich men more lucrative than any here mentioned, but which are not to be classed in any way as menial. For instance, Miss De Barril, who is private sec retary to Mrs. Cornelius Vanderbilt, draws salary of \$3,000 a year and performs duties which occupy but a small portion of her time and which permit of her living at her own home and merely spending a few hours a day at the home of her em

ployer. These secretaries are women of breeding and good social position, whose opinions upon points of etiquette and social arrangements are of great value.

Easy Made Picture Frames.

Editor Green's Fruit Grower:

Where is the woman who has no aspirations for the novel and attractive in home decorations? Do not all women who love their homes want them made as beautiful as possible with their own handiwork? doubt if we appreciate what we buy half so much as what we make, hence I am going to tell you how to make a very pretty

picture frame of common material. Gather a goodly supply of pine cones and gum-balls. Put these in warm water. After soaking awhile the pine cones can easily be picked to pieces. After doing this, take a stout card-board the width and size you wish your frame, and arrange these petals with the convex side up, in row touching each other at one end of your card-board and sew firmly. They will not be difficult to sew through on account of their soaking. Let the rounding ends of the next row extend well up on the first row, completely hiding the stitches there, and so continue until your four pieces are covered, then fasten securely at the corners, sewing on a whole cone to hide the fastening. Tack a row of gum-balls on the inner edge of your frame, and when dry give it a good coat of varnish. You can leave it with only the varnish for a finish, or give it a coat of gilt, or some delicate colored paint, as best suits your fancy. ter County by Marion Story, well-known | There will be many ways of arranging these balls and cone petals suggest themselves to your mind as you work with them and you can have quite a variety of frames, with little trouble. By using different colors of paint, the sameness will be destroyed to a great extent.-Katherine Allerton.

Mastering Difficulties.

Editor Green's Fruit Grower:

No doubt there are many farmers' daughters like myself who desire many things for their advancement, that they can not purchase, and yet need for their higher development. Among other things we may often want a piece of new music, but know it is useless to say anything about it, as it costs forty or fifty cents, perhaps less, but we haven't any change at all, and father dislikes to be asked to buy so many "useless things," as he terms it, until his farm is improved to the utmost. Where there is a will there is usually a way and we may

I took some left-over wall paper (which

Vines.

Vines, indeed, may cover a multitude of sins-foundations, bare walls, unsightly board fences, often covered with signs, and unpainted sheds: vines may serve as screens, and give privacy to the yard; vines may give a shady nook in the little corner that has so often worried us to care for. But above all, vines may make our houses homes indeed, adding grace and beanty to even the stateliest mansion. There is such an endless variety of vines and most of them are so easily cultivated that they appeal to the veriest novice or the busiest housewife. In planting you may have all of one kind or choose many varieties. For quick effects over balcony, fence or screen the morning-glory, moon-flower, nasturtium, Cobaea scandens and cypressvine give most pleasing effects. For slower and more permanent results are the ivies, woodbines, honeysuckles and their kind .-E. L. Shuey, in Woman's Home Com-

The Magical "Forty Winks."

Every one accustomed to napping must have remarked how much more refreshing is a nap of five, ten or twenty minutes than a long day-time sleep of two or three hours. This is because in a short nap the brain and senses are rested without relaxing the muscular and nervous systems It is simply a breaking up of the current of conscious activity, thus restoring the tonicity of the system. From which the inference is clear that it is the nap habit of only the "forty winks" order that is desirable to cultivate; and the duties of almost every one will admit of such refreshment so far as time is concerned. Indeed, there is no better way of gaining time on a busy day than to cut out fifteen or twenty minutes for renewing the energies. After a morning's effort body and mind both grow tired; the work flags; "things grow wrong." Now is the time for the magic dip, from which you return to your post fresh, in good spirits, ready to carry on things with a vim. It scarcely seems reasonable that a few minutes' daily sleep should have any marked effect upon the health, but that such is the case any one may prove by trial.—Ella Morris Kretschmar, in the Woman's Home Com-

Neatness About the House.

The farm house furnishes the very best opportunity for neatness and ornamentation, and it costs so little to keep buildings painted and in good repair, fences kept up, front yard fences painted or white washed, good walks made, and shade trees and flowers planted that there can be no reasonable excuse for not doing these things. Besides it is economy to do them. It is reckless extravagance not to paint when paint is needed or not to drive a nail when a board on a building has become loose or a picket has fallen from the fence. To neglect necessary repairs is to permit a leak on the farm and in the pocket book. Leaving appearances out of the question entirely-and it is the duty of the farmer to make himself and his farm to appear as well as possible-neatness, as represented by paint and good buildings and fences, is a simple principle of good business management, for any other condition indicates decay and rot. A rotten board or a loose one on a building admits dampness to the

possible now faces her. She cannot find help, and without help it is impossible for the modern farmer's wife to accomplish what the old-fashioned woman did when help was cheap and plentiful. In a house where there are modern conveniences the requirements are in keeping with the advance in facilities for doing work, and there is more expected now of an up-todate housekeeper than in the old pioneer days, when there was no sink in the kitchen and no water near the house. The farmhouse or any other modern house supplied with modern conveniences is also supplied with a dining-room to which food must be carried and served in a manner which would have been considered ostentatious in olden times, when people were content with a kitchen with a sanded floor. There is now an array of rooms for various purposes, and these must be taken care of.

The rest-hour has become a greater necessity than it ever was to the housekeeper. Owing to the more complicated methods of living, the modern woman attempts to do twice the labor her grandmother did. Her brain is crowded with various social and religious problems, which she believes she must understand or try to understand in order to keep up intelligence with the school-children. Her hands are overcrowded with housework, which young women in the country have deserted for more remunerative or more so-called "genteel" work of the factories. The result is that she must give up the effort to "keep up," do what can and systematize her labors so that a relaxation in the middle of the day is possible. It is economy to take such a rest. The amount of time lost in a midday rest of twenty minutes or longer, and the time in preparing a fresh toilet for afternoon, more than made up by the larger amount of work accomplished by a woman with quiet nerves and rested hands.—New

Politeness at Home.

It has been said that politeness is based

York Tribune.

upon consideration for others and carrying out the golden rule into practical life. Yet we are all aware that politeness is sometimes shown where there is no consideration and no higher motive. It is also neglected where there is affection and every reason for kindly consideration. Courtesy ought to be a part of the character, so ingrained in the nature that no familiarity such as exists between near relatives and intimate friends will prevent its exercise. The young man who is the flower of courtesy in his intercourse with society ought to be just as attentive in his family to his sister and his mother as he is to women friends. We all admit this in theory, but a great many families ignore it in practical daily life. The young women are not always taught to show that thoughtful attention to the elder people in the family that was once inculcated as a part of the education of young women as rigidly and as generally as the higher mathematics are now taught. As an apology for the lack of courtesy in modern times we are told that old-time manners were artificial, and that the young man with brusque manners may have a warm heart and be more sincere in his regard for his mother and his sister than the youth of olden times. It is a small matter in itself whether a young man finds a chair for his mother when she is ready to sit down, or helps his sister with her wraps, or pays them those thousand and one attentions which they get along without in his absence. While his neglect of such attention undermines his consideration for his mother and sister, when it develops selfishness and lessens the affection of the

family, it is a serious thing. Human nature at best is exceedingly weak, and needs artificial bonds of various kinds to hold affection. There is no need to remind intelligent people that the politeness of society which is demanded by custom is necessary to civilized living. Politeness at home between near relatives is not so obviously necessary, though of more importance, and is often neglected. It is not safe to dispense with the formalities of courtesy even for those who are most sincerely and most closely attached to each other. "Manners," says Whately, "are the shadows of great virtues," so discourtesy or want of manners, foreshadows neglect and want of affection. Men and women of the old school were scrupulous in the observance of the forms of polite society even in the home circle. The tendency of the present generation to ignore the polite manners of olden times should be discouraged. Families whose members are uni formly courteous to each other are less liable to family disagreements and that unfortunate and treacherous disposition shown in modern times to exhibit shortcomings and differences to the world out-It is hardly necessary to speak of the worldly value of a courteous demeanor

to its possessor. Welcome in every clime as breath of flowers.

It transmutes aliens into trusting friends, And gives its owner passport round the globe."

-New York Tribune

Hints to Housekeepers. Into the better class of kitchens alumin-

um utensils are rapidly making their way, as cooking in these becomes a pleasure and not a task. They are wonderfully light to lift, heat through in about half the time required for ordinary utensils, and preserve a dainty cleanliness and brightness if well cared for. The process of cleaning is simple in the extreme. When finished with rinse the vessel out with warm water, wine out with a kitchen towel and rul with a rough flannel. This silvery metal turns black under the action of soda, so servants should be warned never to use i for cleaning aluminum vessels.

Here is a wrinkle, says a late English magazine, for cleaning laces at home. You must often have despaired of getting your ace that delightfully dingy yet clean color which you see in the shops. Make some very weak tea and add a few drops India ink (the best) to the tea. Dip in

vour lace. To prevent a boot or shoe from slippin off at the heel gum a little piece of velvet inside the heel of the shoe. This will make it cling to the stocking and prevent slip

Pure grape juice, says an authority of foods, is invaluable in either sickness or health. In fevers it is both food and medicine, and is more and more used by phy sicians. Oranges and pineapples make a delicious juice, but the small fruits are more valuable. Currants, used alone or mixed with a third of raspberries, are more so, and the huckleberry and elder perry yield products not to be despised. Blackberries, field or garden, are valuable medicinal agents, and the poorest cherry. uneatable as a fruit, becomes nectar when

made into a drink. A dry sandwich that is convenient for he five o'clock tea tray has for a filling shaved ginger and orange peel. Sugarpreserved ginger and candied orange pee are used for this purpose, spread betwee buttered slices of bread cut in oblong and

What Would Jesus Do.

By SALLIE E. HINER.

When our sky is o'ercast with shadow and gloom, And our anxious waiting seems hopeless and long. When the tempter's suggestions are trying to you,

Put this test to the question: what would
Jesus do?
When the fallen ones steeped in misery and
crime,
Seeming careless of good, to evil inclined,
If rescued again they will not prove true,
Shall we try them again? What would
Jesus do?
My profits would double if I should agree

My profits would double if I should agree With that bland saloon keeper his partner to be. He enjoys the world's honor whether fancied Shall I join him or not? What would Jesus do? I wish I'd not known of that fraud in the firm, If I speak they'll dismiss me, I'll only do will it pay if I to my conscience prove true? This must decide me, what would Jesus do? We cannot remain on neutral ground. We are for or against every evil around. Will it pay? is not for me or for you, But is it honest and right, what would Jesus do?

Some Splendid Jewels.

American women own some of the most splendid jewels in the world. Mrs. George Vanderbilt is said to have the finest rope of solitaire rubies in the country, if not in the world, announces the New York Sun. The same thing is said of Mrs. Webb's rope of pearls, which she is fond of wearing looped elaborately over a velvet corsage. Mrs. John Jacob Astor has a famous diamond crown, and Mrs. Stanley Mortimer has a coronet of emeralds and diamonds. Mrs. George Gould has stunning jewels, including a rope of pearls and one of diamonds. Mrs. Clarence Mackay, possesses a curious trio of rings which be longed to a Hindu rajah. The rings are attached to one another, and though each one is for a separate finger, they must all be worn at once. The rings are of dull gold and contain a fine ruby, two emeralds and two diamonds. The setting imitates a dragon's head holding the stones between its open jaws.

How Shall We Make the Most of Life.

What shall one call that quality which leads some on to make the most of life, and the lack of which holds others for ever in the barren lands or at most but on the edge of success? Is it a sort of genius or is it rather the expression of a type of character than the mark of a deree of mental or mechanical adaptability? A great many people know how to do something, but not a great many people, it would seem, know what the world wants to have done and what part of it they ought to be able to do. With ever-increasing insistence the question comes home to us. Is this state of affairs inevitable or remediable? When trained workmen complain of lack of employment, is the social order wrong, are political conditions at fault, is it a matter of supply and demand for the economists to explain toward solution, or is it a moral and mental sifting process which is inseparable from the progress of the race? Must we apply ympathy, and nothing more, to those ineffectual persons who must not only be trained by society to do a certain kind of work, but must be kept, by society, with that specific kind of work to do?-From "The Point of View," in the January Scribner's.

Storyettes.

Two young attorneys, says the Philadelphia Call, were talking in the postoffice corridor the other day and one of then

"Jack, I've sworn off smoking. Sort of a New Year's resolution, you know. suppose you have taken some sort of a pledge, haven't you?" "No," replied his friend, "Not one, I

tried it last year and it failed.' "How was that?" "Well. I have always been a sort of

pendthrift, as you know. So last New, Year's Day I said to myself-'Jack, everyone else is making some sort of a resolution, why not make one yourself?" resolved to save up a little money for a rainy day. That afternoon I placed a ten-doliar note carefully away, and-the next day it rained."

A story is told of a former mayor of Birmingham, England, that he gave orders to have his robes of office lined with "ver min." When the late Alderman Sturge was mayor, he received a royal command to dine and sleep at Windsor. This, of course, meant court dress and a sword The court dress was reluctantly submitted to, but as a member of the Society of Friends, and, moreover, one who had greatly distinguished himself in the cause of peace, for he had formed one of the peace deputation to the Czar before the outbreak of the Crimean war, Mr. Sturge would not consent to wear a lethal weapon. A compromise was happily effected. A scabbard and hilt of the usual kind were at his worship's side when the presentation to royalty took place, but the sword was a mere lath of wood. Fortunately, the worthy Quaker was not called upon to draw in defense of his sovereign.

Pain Conquered; Health Restored by Lydia E. Pinkham's Vegetable Compound.

[LETTER TO MRS. PINKEAM MO. 92,649]

"I feel it my duty to write and thank you for what your Vegetable Compound has done for me. It is the only medicine I have found that has done me any good. Before taking your medicine, I was all run down, tired all the time, no appetite, pains in my back and bearing down pains and a great sufferer during menstruation. After taking two bottles of Lydia E. Pinkham's Vegetable Compound I felt like a new woman. I am now on my fourth bottle and all my pains have left me. I feel better than I have felt for three years and would recommend your Compound to every suffering woman. I hope this letter will help others to find a cure for their troubles." - MRS. DELLA REMICKER, RENSSELAER, IND.

The serious ills of women develor from neglect of early symptoms. Every pain and ache has a cause, and the warning they give should not be disregarded.

Mrs. Pinkham understands these troubles better than any local physician and will give every woman free advice who is puzzled about her health. Mrs. Pinkham's address is Lynn, Mass. Don't put off writing until health is completely broken down. Write at the first indication of trouble.

Servants in attendance on . Millionaire's Family of from two to four people flowered sides securely together, making structure and pretty soon there will be course coachmen, grooms and so on are not included in this category. it the exact size of regular sheet music. I more rotten boards or more loose ones Collis P.Huntington, whose massive gray prepared as many leaves in this way, as Broken down fences are a temptation to stone palace stands at the southeast cor-I needed, then with pen and ink carefully ner of Fifth avenue and 57th street, mainlined it for writing music, and very soon I would have the entire selection copied. I tains his establishment in the same liberal can readily borrow music of friends who the way that the careful business men in addition keeps up fully ready for occuhave a good supply, and they do not care make a success of their business. They to loan it, as I take good care of it, and achieve success by attention to the smallments, one in Westchester and one in Calireturn it promptly. The title page can be made to look real attractive with some fornia. The staff of domestics in his Westches easy drawing and the title in quaint, oddter house is as follows: One housekeeper, shaped letters, and you will feel proud of one cook, two kitchen maids, two launyour music as it stands before you on the dresses, one chambermaid, one parlor maid, rack. Some little design of flowers is one ladies' maid, a butler, a first and a pretty on the title page. I have a home second man, two useful indoor men, two made copy of "Sweet Bunch of Daisies," coachmen and two helpers in stables, beand on the title page at the left of the sides four general utility men about the title, I painted a bunch of these pretty little flowers, and printed the composer's

florists and laborers.

press Company, has at his city residence a maid, a cook, two kitchen maids, two chambermaids, a parlor maid, a ladies' maid, two laundresses, who are allowed whatever outside help they may require; a butler and a second man, a useful man who also brings in what outside help he needs, and a valet. In the stables there

are a coachman and two helpers. Clarence G. Dinsmore, now abroad, when residing in New York, had an establishment precisely similar, excepting one more

The ex-Vice-President and ex-Governor, Levi P. Morton, head of a great banking house, maintains two establishments in a truly princely fashion, one at Washington, the national capital, and another s country seat and model farm on the Hudson River, known as Ellerslie. At each of them, with possibly slight variations, the staff is as follows: A steward, one housekeeper, one butler, a first and a second man, a hall porter, a useful man, two coachmen and three helpers in the stable: two chefs, two kitchen maids, with one or two helpers from outside; three laun dresses, three chambermaids, three ladies' maids, one nurse and from two to four seamstresses as occasion may require.

The above does not include the force of name at the bottom. I am not ashamed men at work on the grounds, gardeners, of it when visitors see it with the bought music. My dear girls, there are so many William B. Dinsmore, the foundation of things you can do yourselves that you need whose fortune was laid in the Adams Ex- not despair because father doesn't give you money to get what you think you need. household constituted as follows: A house- Use your heads and you will find that you may overcome many obstacles and work toward your ideal in spite of difficulties. -Katherine Allerton.

The Secrets of Childhood.

be grown up, when one thinks of the unnecessary slights and slurs that are put upon their youthful opinions, of the thoughtless cruelty with which their little errors and embarrassments are held up to the general ridicule. There is one refuge open to the child, and sometimes it is the only one, from harmful exposure and painful misunderstanding. That refuge is in silence; and if we remember our own childhood more vividly, we should never say, or think, that our children have no secrets from us. The secrets of artless childhood are indeed many; most of them are in themselves trivial-a few are important; but they are all important in that they secure to him a privacy otherwise impossible, in the shelter of which his inmost consciousness of self remains invio-late.—Elaine Goodale Eastman, in Woman's Home Companion.

The Rest-Hour. The overworked housekeeper usually ooks upon the rest-hour as an idle phrase attractive in sound, but something that is practically impossible to any woman who has not idle time at her command. The take it. The tired house-mother, to whom entire labor of the housework falls, whose work begins before sunrise and extends far into the hours of night, does not allow herself even the slight relaxation from work the rest-hour would bring. The erroneous idea prevails that rest means idleness with a great many otherwise sensible women. The farmer who would work his horses continually would deserve and re-It is no wonder that all children long to ceive nothing but condemnation for his folly. The merest farm boy knows that the farm stock cannot be worked continuously, but must have periods of rest to recuperate their powers of work.

It is not only the farmer's wife who forgets the need of rest and "nerves" herself to labor without ceasing. Even the midday hour, when every hired laborer de-mands his "nooning," she fills in with hardest duties of the day, that of preparing and serving the heaviest meal of the day, and washing the dishes and pots and pans it was cooked with. In these modern days, when household help is scarce and expensive, the problem seems nearer solution because it has reached an ultimate point where something must be done. No woman of the present day can do as much as the overworled farmer's wife of olden times, with the assistance of the buxom young girls who were once ready to be circular shapes

very class of people who least need the rest-hour are those who make it a rule to the care of the children and perhaps the

stock to become breachy, and expose crops

to the danger of being injured by cattle

and horses. To permit such things is not

est detail and by keeping their establish-

ments, in every part, up to a high stand-

ard of condition.-Epitomist.

in long rows, wide enough apart to admit

itated the culture of the family garden.

AREA.

Last year I gave in Green's Fruit

Grower an account of two visits to a five-

acre village lot belonging to Mr. M. N.

Cook, South Byron, Genesee Co. A few

weeks since I wrote Mr. Cook soliciting an

account of sales from his little place and

sired information. He said his loss in

prunes from rot was fully 1,000 nine-pound

These brought \$408.33-a little over three

for the numerous diseases that attack va-

rious species of fruit. Both Bordeaux mix-

been successfully employed to diminish the

effects of ripe rot in plums, peaches, grapes

There are five acres in Mr. Cook's lot,

cluding an old apple orchard, the remain-

garden, etc. The following is his state-

Apples, of all classes sold......

the yield about 50 barrels, he concludes.

I am much pleased to record such fair re

pessimistic order have for many years bor

tury in applying science to the culture of

the soil, that the dreaded time will be

THE LOUDON RASPBERRY.

Every friend of the editor of Green's

reputation of the Loudon red raspberry which he has placed before the public. It

receives high commendation from nearly

every one who has given it a fair trial.

Experiment stations speak emphatically in

its praise and State horticultural societies

place it at the head of their lists. It was

brought up by a question near the close of

the last meeting of the Western New York

Horticultural Society and I make the fol-

lowing extract of the discussion from my

notes in the New York Weekly Tribune

hardy, enduring 25 degrees below zero. He

is the finest at the Geneva Experiment

Saw the Point Himself.

The following story is told of a Phila-

delphia millionaire, who has been dead

some years: A young man came to him

"Do you drink?" asked the millionaire.

"Stop it! Stop it for a year and then

broke off the habit at once, and at the end

of the year came to see the millionaire

"Do you smoke?" asked the successful

"Stop it! Stop it for a year, and then

The young man went home and broke away from the habit. It took him some

time, but finally he worried through the

"Do you chew?" asked the philan-

"Stop it! Stop it for a year, and then

The young man stopped chewing, but he

never went back again. When asked by

his anxious friends why he never called

on the millionaire again he replied that he

knew exactly what the man was driving at. "He'd have told me that now I had

stopped drinking and smoking and chew-

ing I must have saved enough to start my-

self in business. And I have."-Youth's

Farm Wagon for Only \$19.95.

"Yes, I do," was the desperate reply.

year, and presented himself again.

The young man

Station."-P. C. Reynolds.

him in husiness.

again.

thropist.

Companion.

"Once in a while."

come and see me."

"Now and then."

come and see me again."

come and see me again."

pushed far into the future.

and other fruits.

ment of amounts of sales:

received from him a letter giving the de-



tion is that every person sending in their name must sell to us 24 of our Arc-Light Electric Lamp Wicks a Five Cents each and return to us 81.20 for same and as a premium for selling the wicks we will give a beaut ful Gold-Filled Ring, set with an imported stone, which are the control of th will puzzle an expert to distinguish from a genuine diamond which would soll for \$100.00; if a different premium is desired, a selection can be made from our large premium list sent you with the wicks.

No money required in advance. Send for wicks, sell them and return \$1.20, and any premium selected will be promptly sent. We will take the wicks back if you cannot sell them.

Our wicks are something en-

Our wicks are something tirely new. They give a linearly equal to the Elec. Light, being chemically of the control of the cont



Varieties of Small Fruits for New York State.

The red raspberry, of which we grow the Marlboro, Columbian, Miller, Loupen and Royal Church, are planted in hills 5 x 8 feet, and the next year after planting stakes about five feet high are set at each hill, and the canes not over five or six in number are tied to them. The old canes and the surplus shoots are removed the following spring, the ground fertilized and cultivated.

While it is quite costly staking this crop we think the size and quality of the fruit is enough better to make it pay. I have received from the Marlboro \$350 per acre.

The black caps have been a paying crop in former years for near by markets. have grown several kinds but principally Kansas, Nemaha and Gregg. We grow them in rows six feet apart, and set them three feet apart in the row. We formerly tied to a single wire, fastened to posts about three feet high. We now use a wire on each side of the row and tie the wires together about every ten feet. This is quicker than tying the canes and holds them more securely. They cannot get down. From one small plot of five-eighths of an acre I picked over 5,000 quarts, which sold for \$420.

Blackberries are uncertain crop with me. The kinds I am growing are not entirely hardy at my place, the Era and the Minnewaski. We grow them in the same way as the black caps, with rows eight feet apart. We find the two wires the only way we can control them, so that we can cultivate between the rows. I have received over \$400 for the fruit from a single acre in one season. Again it would take four acres to do it. I am growing the Eldorado, but only in a limited way. This berry is sweet, without core, but has not the flavor of Minnewaski.

A great many currents are being grown in the Hudson Valley, many growers having from 20,000 to 25,000 hills. But the ******** price has been low for several seasons. Close pruning, fertilizing and spraying are essentials in securing a crop. While many sold at two and a half to three cents per pound in the New York market the past season, I have a friend who obtained four and a half and five cents. I received this price for my own crop. Quality governs prices, and we must have it in all kinds of fruits if we would get pay for our labor in producing it.-Strawberry Culturist.



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We sell to you direct from our factory at wholesale prices. We are the larg-cest manufacturers of vehicles and harness in the world selling to the consumer exclusively. You may not have been accustomed to dealing this

We ship our goods anywhere for examins Send for our large Hustrated Catalogue - PREF. Elkhart Carriage and Harness Mfg. Co. W.B. PRATT, Elkhart, Indiana.





If you are going to pay for a carriage why not pay the least you can for the best vehicle? Get all you can in material and workmanship—pay as little as you can for handling and "extras."

You save the Jobber's commission and the retailer's profit when you buy direct from the factory. You pay the cost of making with one moderate profit added. We are not agents, but manufacturers of buggles, carriages, surreys, phaetons, wagons, harness and horse accessories. Everything guaranteed. With our illustrated catalogue you can order easily and safely. If what you order does not suit, send eight both ways. First, get the catalogue. You are welcome to a copy. THE COLUMBUS CARRIAGE & HARNESS COMPANY, COLUMBUS, O.

CANNING MACHINERY AND SUPPLIES ESTIMATES FURNISHED ON COMPLETE PLANTS. Chicago, Ill SEND FOR CATALOGUES.





If it is invested in the new Excelsior Strawberry. They will make big money for shippers in the markets of '99. We have over 21,000,000 straw berry plants, all healthy, well-rooted, ready to grow big crops. In our nurseries are over 1,000,00 Peach Trees up to the high standard of the Ha rison's Nurseries, free from insect pests, or disease of an kind. Columbian Asparagus Roots are fortune-build as for those who religious them. Welfs for the suppose of all the suppose dose who cultivate them. Write for catalogue of a

The Agricultural Drain Tile ALBANIAN . V., are the YER

The "Big Berry"

P.D.D.D.D.D.D.D.D.D.D.D.D.D.D. A NAME WANTED FOR THIS REMARK-ABLE BERRY. We offer \$25.00 in each to any person who will suggest the best name for this variety. This is the largest and most pro-ductive strayberry, we have ever tested, and it is worthy over tested, and it is worthy
of a good name. We are
confident that we shall get
a good name from some of
our patrons, hence this
liberal offer to the person
who sends us the name which seems to us to be the most desirable and appropri-

C. A. Green to be judge.

C. A. Green to be judge.

The conditions of this offer are as follows: Every person who buys three plants will be allowed to suggest one name. A person who purchases six plants will be allowed to suggest two names; a person who purchases twelve plants will be allowed to suggest four names. If you order 100 plants you may suggest ten names. Plants to be sent by mail, post-paid, without charge for delivering to you.

If you have not our estalogue for 1899, send for free copy with prices and particulars. All the leading strawberry and other small fruit plants for sale.

GREEN'S NURSERY CO., Rochester, N. Y.

GREEN'S NURSERY Co., Rochester, N. Y.

REYNOLDS

EXPERIENCE IN HORTICULTURE.

The Gladsome Springtime.

The word spring has a charming sound to the agriculturist or horticulturist. After months of comparative inactivity he resumes the tillage of the soil. Although from year to year he repeats about the tivating, hoeing, sowing or planting seeds, transplanting trees or plants, yet his labors are more varied than those of the artisan the manufacturer or the merchant. If he is a progressive man he probably has nev ideas, gained from his previous years' prac tice or observations, from reading, thinking or conversation, that he applies as an experiment. This gives new zest to his labors and breaks their monotony.

endar is not a reliable guide on this point. The first of March is the beginning of the the wind moved 8,013 miles during the snow, causing a damp, chilly atmosphere that convinced all of us that it was a cold, unpleasant month.

I doubt not that many horticulturists, impelled by the knowledge gained the past year, have resolved to begin betimes to use preventives of fungi and insects. The first few moderately warm days that cause the buds to expand also cause the eggs of some species of insects to hatch and those insects that have wintered in a larval state, in small cases on the branches near the buds, to crawl forth and enter the opening buds and commence to feed upon the more tender leaves and blossoms Among those early visitants, the Budworm, several species of leaf-rollers and leaf-folders, the tent-caterpillar, aphides, etc., do the most damage and, by the time the buds are fully unfolded the leaves are sadly mutilated, presenting a ragged appearance, unless these enemies are met with a dressing of poison on their first food. Germs of various fungi make their appearance early upon bark and opening leaves and blossoms and, unless promptly served with Bordeaux mixture will germinate and send their mycelia (fine rootlike threads) into the interiors of leaf and bark, absorbing their sap and reducing their vitality. Many orchardists lost their apple crop, last year, because they were guided by the calendar rather than by the

appearance of the buds. Success with garden vegetables, small fruits, or large fruits, depends largely upon preparation of the soil and the way the seeds or roots are planted. The soil should be made so fine that the roots of growing vegetation shall reach every particle in search of nutriment. Few soils are so destitute of plant-food that good crops may not be grown if the food is available and the finer the soil the larger the proportion that will be soluble and available When we come to plant seeds or roots the soil around seeds or roots should be compacted so as to be brought into contact with them and yield to them its food. Many gardeners tread in some of their seeds and intelligent transplanters press the soil around the roots. Strawberry plants are very likely to die if the soil is not pressed around the roots. There is a time to loosen and a time to compact the

The horticulturist has other work to do in early spring besides planting and cultivating trees and plants. Vegetables enter properly into the make-up of a good daily diet and most vegetables are best grown in the family kitchen garden. A well planned and a well-kept garden is an ornament and a blessing to a rural home. In our boyhood days the farmer's garden was usually a small plat of ground, generally in the rear, sometimes at the side of the dwelling, fenced with pickets to exclude the chickens; plowed and harrowed with the horse team, after which horse were excluded during the remainder of the season. All subsequent work was accomplished with spade, hoe and fingers. A wooden rake was sometimes used upon the beds to rake out stones and litter. Around next to the fence was a row of currant bushes and, perhaps, in one corner, was a bed of sage, and some other medicinal herbs, that the plowman must be careful to spare. Small, narrow, raised beds contained the vegetables that were to be weeded by hand, such as onions, beets, lettuce, radishes, parsnips, carrots, etc. Oh, well I remember how my back used to ache, more than sixty years ago, weeding out those beds, after school or on Satur-days when there was no school. Rows of peas, beans, sweet corn, cucumbers, melons, squashes were planted to be kep clean with hoe and fingers. Generally, in having and harvest, when most of the vegetables had matured and been gathered weeds grew and ripened in the neglected garden which then became an unsightly spot. Later, when I came to lay out my own family kitchen garden I learned to lay it out in the form of a lengthened parallelogram, with length much greater than breadth, so that most of the cultivation

was left at each end upon which the horse could turn without trampling down the

operations: plowing, harrowing, cul-When does spring commence? The cal-

spring months but we rarely have much spring weather the first half of March year we did have spring weather from the very first of the month, but this year we had very little during the month. If spring means the upspringing of vegetation the first of April revealed nothing of the kind here and buds upon the trees are still quite dormant. It is a common opinion that the past March was an unusually cold and unpleasant one, but a summary of the weather of March by the Observer of the Weather Bureau of Rochester shows that the mean temperature (32 degrees) was one degree warmer than the average mean for 29 years. The mean for 1872 was 22 degrees and for 1885 21 degrees, 10 and 11 degrees colder than the last March. That it was an unpleasant month is borne out by statistics as well as by human nerves. There were but three days in the month entirely exempt from precipitation of rain or snow. True, on three of the 28 days there was but a "trace" while on 25 days the precipitation of rain or melted snow amounted to .01 .of an inch up to .66 of an inch and month. In stormy, blustering January the wind moved but 7,410 miles. Therefore, it was the high winds, the repeated falls of snow or rain and the melting of the

MAKING A GARDEN.

could be done with a horse. A sod plat

In order to introduce their Low Metal Wheels with Wide Tires, the Empire Manufacturing Company, Quincy, Ill., have placed upon the market a Farmer's Handy Wagon, sold at the low price of \$19.95. The wagon is only 25 inches high, fitted with 24 and 30 inch wheels with 4 inch tire.

This wagon is made of best material throughout, and really costs but a trifle more than a set of new wheels and fully guaranteed for one year. Catalogue giving full description will be mailed upon application by the Empire Manufacturing Co., Quincy, Ill., who also will furnish metal wheels at low prices, made any size and width of tire to fit any axle.

 $Vx(\mathbf{x})3j?$A:z0;&\frac{1}{2}e!w!$ which, being interpreted should read, send for freen's Free Illustrated Catalogue, and save alf your money by dealing direct with the pro-lucer of trees, plants and vines. Address, GREEN'S NURSERY CO. Rochester, N. Y. The Poem I Couldn't Write.

vegetables. All vegetables were planted a cultivator, which was frequently used, unning so close to the plants that but little weeding was left to be done with

fingers. This arrangement greatly facil-But not a rhyme would come to me, Though I were anxious as could be.
I held my pen with a nervous grasp,
And tried to think of a rhyme for task. LARGE RECEIPTS FROM SMALL

For I thought I had talent as a poet And I wished to let my friends all know lt, So I tried and tried my very best To make in art this one conquest.

Now poetry looks so easy to make, I thought any one could, if the time he'd take; But all my thinking nothing availed And I had to acknowledge that I had failed.

cents a pound. This loss from rot in prunes and plums is very liable to occur, but I am confident that fruit growers will be able to control it by timely spraying Churning, cooking, washing and sewing, too, with some fungicide that will not discolor the fruit nor endanger its consumer. We And the thousand and one things women do Now I find that my life is filled with joy That rivals that of the "Barefoot Boy." make slow but pretty sure advancement in the discovery of safe and effectual remedies

And carefully do the commonplace things That make our home so peaceful and grand And the pleasantest place in all the land. ture and ammonia copper carbonate have

der is occupied by house, barn, dooryard, for strawberries it is necessary to observe the following points, says the Country Gentleman. Cherries and early peaches sold...\$ 18 73 1. Never sell any except fresh berries.

2. Give honest measure. Prunes sold a Buffalo dealer.... 362 14 Prunes sold to a New York party. 34 29 Prunes sold to town's people.... 11 90 Pears, 126 barrels, sold for 264 75 Pears, 3 barrels sold in New York. 12 00 | tomer.

Quinces, 5 bbls. sold in Baltimore. 22 58 99 34 Apples for family use...... 15 00 Abundance plums...... 5 11 | your customers; the first man around gets Total.....\$845 86 In addition to the fruit he had a well stocked kitchen garden that sapplied the family with a variety of vegetables and small fruits. I think there are many one hundred-acre farms from which much less in value is sold. Mr. Cook writes that his prospect for fruit the coming year is all that he could wish. The Pear Scylla effected a lodgment in his orchard of Duchess and did considerable damage, reducing turns from a small area of land. It is an

earnest of what may be effected when tillers of the soil come to be more familiar with the soil, its composition and productive capacities, when they are educated to their noble vocation and understand the methods of extracting from the soil the greatest amount of wholesome, palatable, nutritious food. Political economists of the owed trouble in regard to what mankind will subsist upon, when population shall crowd upon the means of subsistence, when the earth shall be unable to produce enough to feed its inhabitants, but I am well as anything else. of the opinion, judging by the progress that has been made during the last half cen-

7. I find courtesy to customers goes a great way; if a man will not be a gentleman in business, he cannot hold all his customers. 8. If you grow berries that you are

papers during berry season. It does not Fruit Grower must rejoice in the growing cost much, and besides, the editor may even take his pay in berries. 9. The grower should always to make any mistake on his part perfectly right before he leaves the customer. It doesn't pay to be too close in dealing; bet-

ter give a penny to a customer in making change rather than appear as if you wanted to squeeze the penny too hard.

A Bit of Wedding Cake.

"Chairman Willard likes it, thinks it a helplessly. finer berry than the Cuthbert. William She looked up at him and laughed as he Smith, a veteran nurseryman of Geneva, endorsed Mr. Willard's commendation. Mr. L. H. Reed, Grand Rapids, Wis., finds it satin ribbon. "There's a certain inanity in treasuring thinks it the grandest red raspberry he has

> you give it away."
> "Charm?" he echoed. "What charm has an infinitesimal piece of cake that would not stay the appetite of a mosquito? Silly

solemnly, "that you have attained unto years of discretion and have never tried one day and asked pecuniary aid to start the charm that lies in a bride's cake?" "Never!" he averred. She looked so bewitching in her brides-

maid array that he would have sworn to any fact or fallacy whatsoever could he thereby prolong the tete-a-tete. In seektous best man might be eluded, he had found this curtained corner of the porch.

"Then you must try it before you are a night older," she said, with a pretty air of authority. "Cut a card into seven slips and give me a pencil, and I'll do the rest." He obeyed with unwonted docility. "This is merely a short and sure way to

"I know whom I want to marry. I don't need a piece of cake and seven slips of paper to tell me that." "Whom one wants to marry and whom

vidual!" she replied sententiously. "Oh!" was his only audible remark.

one blank,-for bachelorhood, you know. "Um!" he assented. "Then you will place them under your pillow, with the wedding cake, and draw

with a pause of emphasis. "I understand," he broke in. "The last shall be first. But I can't think of six names; one is so indelibly written on my

rupted blithely. "You know they must be written by some one else, anyway,-some disinterested person." "Oh!"-very humbly.

tately. "There's one thing I forgot," she was saying; "each slip must be destroyed as it is drawn out, and only the last one read." "Humph! Strict requirements, these! It would give a fellow some satisfaction, per-

you do! Promise, now,"-imperatively. And he promised. Then-"Oh. I say," he cried, interrupting the writing again. "You'll put your own

Written for Green's Fruit Grower by Katherine Allerton.
To write a poem I once did try
But it caused me many a weary sigh.
I thought and thought with might and main,
Then scratched my head and thought again.

"Life's duties" next came to my mind But no rhyming word was I able to find, Faith, Hope and Charity came next, But when unmatched I grew perplexed.

baskets, leaving but 1,350 baskets sold. Experience's lesson is sometimes dear But I learned right then to stick to my sphere. I'm no longer a poet in my fondest wishes, But I'm an excellent hand at washing dishes.

Since I've quit trying my poetic wings And carefully do the commonplace thing

A Home Market for Strawberries.

three and one-half of which is in fruit, in-I find that to get a good home market

> 3. Use care in grading your berries. The kind of pickers you employ will often decide whether you will keep or lose a cus-

4. Get around early in the morning. This is quite necessary, as other growers will often take this advantage to get some of the best chance, and in fact if a grower gets in the habit of not starting on his route until two or three hours after sunrise he will find his profits much less, and often a surplus left over. I find a good way is to have one wagon on the market selling from house to house from early in the morning until 11 o'clock, and another wagon bringing the berries from the patch. Then follow the same plan in another part of the town in the afternoon, beginning at 2 P. M., as a large trade for tea can be worked up. I always notice that in the three hours before tea consumers are generally anxious to get fresh herries

5. Do not depend on one variety alone. Some customers like an acid berry, while others will not have anything but the sweeter kinds-like Haverland. I find the Warfield and Enhance the best sellers for canning. If you have the tart and sweet varieties, there is no reason why you should not hold your customers' trade when you once have it, providing you observe the golden rule in dealing with them. 6. Neatness of one's clothes and general appearance, as well as a neat rig and a well-groomed horse, help to sell berries as

pleased to have people look at, place a small advertisement in the leading local

"But what shall I do with it?" he asked stood dangling a square, white box by its

another fellow's wedding cake. Won't you take it .- as a gift?" seen. Mr. T. S. Hubbard, Geneva, said it "Thanks, no," she answered. "I have a sufficiency; besides, the charm is broken it

> custom this, anyhow, of---' "Do you mean to say," she interrupted

ing a spot where perchance that ubiqui-

find out whom you are to marry," she re-

one marries are not always the same indi-

"Now," she went on, "I shall write name on each of these six pieces and leave

out one each morning; the last one-

"Oh, I can arrange that!" she inter-

But as he watched her brows wrinkle in such perplexity, he concluded that it was not such a bad thing after all, this idea of tying up wedding cake in boxes, and he ecame convinced that weddings, on the whole, were not such a bore when he saw the ubiquitous best man peer into the halflight of the veranda and retire precipi-

haps, to know whom he had escaped. "Oh, but the charm won't work unless

name down, won't you?" "Shall I?" she queried doubtfully.

"Well, rather." And though the light was dim, she saw something in his eyes that made her add hastily: "Oh, very well, since it is by request."

On the eighth day thereafter she received the following telegram: "Your name seventh. Has charm worked?" And it was not till their honeymoon was

at its zenith that she told him-confidentially,-that each bit of cardboard had borne the same name, and there had been no blank .- Montreal Herald.

Value of Shrubs and Fruits.

At the meeting of the Vermont Horticultural Society, President Buckham, of the Vermont University, said that he had a small place on which he planted about \$25 worth of trees and small fruits. When he came to sell the place, he found that the trees and fruit had added \$1,000 to the value of the place. We have seen many cases where the addition of trees, shrubs and fruits to a country place has added both to its rental and selling value. We found this out in hunting for a farm to buy or rent. Where ornamental trees and fruits were abundant and well-caredfor, not only was the price higher, but the demand from buyers was very much greater.—Rural New Yorker.

Fruit Eating Animals.

The sweet and luscious grapes are eaten with great relish by horses, cows and sheep. Deer are fond of grapes, and often do much damage in California vineyards. Hogs fatten upon grapes, rabbits love them, and a number of the wild animals. as the elephant and camel, will eat them. The apple ranks high in favor, and horses, cows, sheep, goats, hogs and many of the wild animals eat apples with avidity. The elephant and deer are fond of them, while others become accustomed to them after a trial or two. All the domes-

fond of apples. The fig is the favorite fruit among animals, and camels, horses, cows, hogs, sheep and goats will eat this fruit as readily as man. The elephant considers it a dainty, while all the fowls greedily de-

tic fowls and many of the wild birds are

The Esquimaux dog will eat almost any of the dried fruits. The sour or acid fruits. as the orange, lemon, lime, shaddock, etc., as well as sour plums, and the bitter olives are rarely eaten. Nothing, perhaps, is so bitter as olives

freshly picked, yet after they turn purple and black, hogs soon learn to devour them. Peaches are not a favorite except with few animals, though rabbits fancy them. The cherry is a delicacy much sought after by the whole feathered tribe. It is well known that rabbits, rats and squirrels all eat apples.

The ostrich will consume half a dozen kinds of fruit.-Waverley Magazine. Possibilities of a Town Lot.

What is the horticultural possibility of the ordinary town lot? That it may be great and important is shown by what a certain enterprising citizen of Santa Monica, Los Angeles county, has done. Here is the story as told by the Santa Monica

The lot at the corner of Arizona avenue and Third street is 50x150 feet, comprising, therefore, 7,500 square feet of ground. It is the property of Dan McCarty, the tailor, a man whose personality is familiar to every resident of Santa Monica. Originally, this lot was like about

be one in every one thousand lots that is equal in productiveness, but that is a matter of doubt. Deduct from the 7,500 feet 400 square feet for McCarty's little shop and dwelling. 400 feet for the walk extending from front to alley, and 500 feet for wood storage, furnace room, etc., and you have

6,200 square feet under tillage. On this lot are thriving seven apple trees, three peach trees, twenty lemon trees, ten orange, one French prune, two guava, one loguat and four tomato trees, all in bearing; also four everbearing blackberry bushes.

Of these fruits one can pick from the trees to-day lemons, oranges, tomatoes, guavas and blackberries. The latter are plucked every month in the year; the guavas have borne three crops this year, and the fourth is now coming on: the tomato trees have given two crops. From the lemon tree ten boxes have already been gathered, and it is estimated that they now carry an average of one box to each tree. The apple, peach, pear, etc., have borne bountifully of most excellent fruit the present year, as indeed they have every year since coming into beauty.-

California Fruit Grower. Don't Throw Away an Old "Acme" Harrow.

"It is an implement that never wears out. Viz.: only the coulters wear, and they can be replaced at small cost.' The Manufacturer will furnish Extra Parts for any "Acme" Harrow made since the beginning of the world, and at very Reasonable Prices. See advertisement in another column.

Three Hundred Varieties of Flower Seeds, Free by Mail.

Green's Twenty-days' Offer.-Chas. A Green offers to send by mail, post-paid, a packet of mixed flower seeds, containing over three hundred varieties of flowers, on the following terms: He will mail you the above seeds free on receipt of 35 cents for Green's Fruit

Grower for nine months to January 1st

1901. He will mail you the above seeds free upon receipt of 25 cents for any of his books, which are also to be sent by mail, postpaid. These books are, first, Green's American Fruit Growing; second, Green's American Poultry Keeping; third, Green's Six Books on Fruit Culture; fourth, Green's Four Books on Fruit Culture; fifth, Green's How We Made the Old

Remember, this offer is good for only twenty days. Send for it at once if you desire it. This is a very attractive offer, and the seeds we shall mail you will give you great delight and comfort.

Make Money on your cabbages, onions and early beets. How? Force their growth

with applications of Nitrate of Soda. the quickest of all fertilizers. Es-

Farm Pay.

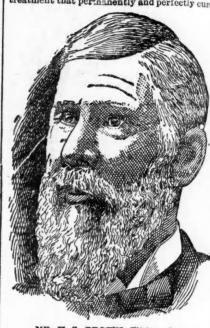
pecially adapted to early vegeta-bles. Produces size and quality at the same time. Book, "Flood for Plants," tells how and why. Free by addressing John A. Myers, 12—G John St., New York. Nitrate for sale by BALFOUR, WILLIAMSON & CO.,

27 William St., New York.

Amazing Success of a Plan Invented by Dr. Rice.

No Pain Nor Operation and a Perfect Home Cure.

Dr. W. S. Rice, of 350 B. Main St., Adams, N Y., who has spent all his life in the study of abdominal rupture as perfected a system of



MR. H. G. BROWN, Elkton, Ore. any rupture no matter how old or severe a case

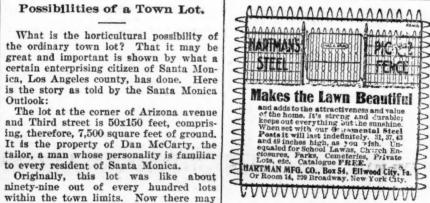
any rupture no matter now onto severe a case it may be. It would be good news if he only assured his patients of comfort but when he positively and absolutely guarantees that his system will expect the interest of the system o asm into the hope of the most de

ferer.

The doctor has written a book on rupture that explains every detail of his method and this book he will mail free to everyone who writes for it. Dr. Rice is too modest to permit the publication of his portrait but one of his cured patients, Mr. H. G. Brown, of Elkton, Ore., a fine old gentleman, consented to allow his picture to accompany his statement regarding the marvelous cure which Dr. Rice caused in his case. Mr. Brown says:-"I am very happy to acknowledge that Dr. Rice's method completely

mr. Brown says:—"I am very happy to acknowledge that Dr. Rice's method completely cured me of a dangerous rupture. I have since done all kinds of hard work on a farm and have been as strong and capable as in my younger days before being ruptured. If all ruptured people would try this method I am certain they would be cured as Dr. Rice has a system that is simple, cheap, comfortable, healing and satisfactory to such a degree that from the very first day a man becomes wonderfully relieved and satisfied. I cannot endorse the plan too strongly. It cured me and has cured many others who were encouraged by my success."

Do not be backward about writing for Dr. Do not be backward about writing for Dr Rice's free book. It will interest you deeply and ells in a very convincing manner just why houres rupture. Write to-day. Address Dr. W cures rupture. Write to-day. Addre S. Rice, 350 B. Main St., Adams, N. Y.





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crobicidal application His formulae hav preparation of Cran made in Paris at th Cranitonic Hair Foo his directions, and fore the only logical ment for all hair and The American labo have advertised to g tle to every applican any address, and h Those of our reade advantage of this fr their name and addre Hair Food Co., 526 V

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JADOO F nd for our new catalog THE AMERICAN JA Winter Nellis and

In surplus, also dwarf, L. Far trees, Lombard, Shipper's plum trees, Ben Davis, ees, Victoria and Cherry ruce and Arbor-Vita, about dges, Surplus of Red-Leaved a Poplar. Send us a list of us price your list. GREEN'S NURS

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"PLANET JR." CHAPTERS .- No. 5.

A Farmer's Art Gallery

is the new "Planet Jr." catalogue for 1899. Beside telling all about these famous farm and garden tools, it gives also 16 full pages of fine photographic views, showing interesting farm scenes in California, France, Australia, Manitoba, etc., with the "Planet Jr." tools "getting in their work,"—the Hand Drills and Wheel Hoes, the Horse Hoes in all their many forms, the wonderful Pivot Wheel and other two-horse tools. It is the most interesting and inspiring catalogue of farm tools ever issued; and it is mailed free upon request.

S. L. ALLEN & CO., Box 1107 G, Philadelphia.

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r Operation and a Home Cure.

f 850 B. Main St., Adams, N. ali his life in the study of has perfected a system of



BROWN, Elkton, Ore. atter how old or severe a case ild be good news if he only as-of comfort but when he posiely guarantees that his system his is enough to instill enthu-pe of the most despairing suf-

ritten a book on rupture that o everyone who writes for it lest to permit the publication alkton, Ore., a fine old gentle garding the marvelous cure sed in his case.

:- "I am very happy to Dr. Rice's method completely gerous rupture. I have since ard work on a farm and have ind capable as in my younger r ruptured. If all ruptured ruptured. If all ruptured this method I am certain they Dr. Rice has a system that is mfortable, healing and satis-degree that from the very first

nas cured many others who y my success." ward about writing for Dr. It will interest you deeply and Vrite to-day. Address Dr. W. n St., Adams, N. Y.



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S NURSERY CO., ROCHESTER, N. Y.

A NEW MICROBE.

From Paris Comes Word of the New Microbe Discovered by Professor Fahrig, the Eminent Bacteriologist, which, It Has Been Proved, Causes Baldness

MAY

HOW THE MICROBE WORKS. What is Needed to Stop its Ravages and Prevent Our Descendants from Being a Race of Bald Heads.

FALLING HAIR IS CURABLE.

Paris. April 25 .- Prof. E. Fahrig, the eminent professor of chemistry and doctor of science, has made public the nature of is latest discoveries in regard to fibre. human hair and the microbe which causes dandruff, falling hair, gray hair and bald-

In his treatise lately published he describes his experiments as to the contagious properties of dandruff, as caused by the transferring of the microbe from one person to another in hair brushes, etc., end also explains how the microbe can be destroyed by proper germicidal and microbicidal applications. His formulae have been used in the

preparation of Cranitonic Hair Food, as nade in Paris at the laboratories of the Cranitonic Hair Food Co., according to his directions, and this article is therefore the only logical and scientific treatment for all hair and scalp diseases.

The American laboratories in New York City, to prove its wonderful efficacy, have advertised to give away a free bot tle to every applicant, by mail prepaid to any address, and have in consequence been deluged with applications.

Those of our readers who wish to take advantage of this free offer should send their name and address to the Cranitonic Hair Food Co., 526 West Broadway, New York City, mentioning Green's Fruit Grower, when the free bottle will be sent them direct by mail prepaid.

Colorado Gold and Silver Mines.

produce less in value than her farms, rchards and gardens. A fruit tree costs but a few cents. In a few years the fruit gives an annual return of as many dollars. This is by irrigation. A few dollars invested in orchard lands for a few years, gives you a certain income soon, better than Savings Banks or U. S. Bonds, and as safe. Ample references given. Write us for printed matter.

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Planted in soil? Of course not. JADOO FIBRE. Send for our new catalogues.

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Vinter Nellis and Bosc Pears In surplus, also dwarf, L. Bonne and Duchess bear trees, Lombard, Shipper's Pride and Braddaw plum trees, Ben Davis, and other apple res. Victoria and Cherry currants, Norway pruce and Arbor-Vitæ, about two feet high for bedges. Surplus of Red-Leaved Beach and Carona Poplar. Send us a list of your wants and tusprice your list.

GREEN'S NURSERY CO.,

VAN DEMAN PAPERS.

If there is any one thing that the farmer, fruit grower and gardener needs to understand more thoroughly than another it is the true philosophy of cultivation. And then he should know just how to practice it to the best advantage. Although everyone who pretends to do even a little work in the soil has a purpose in stirring it, and Summary of Spraying in Ohio. that purpose is, to make the plants or trees grow. Yet, how few really know all that they ought about this simple subject.

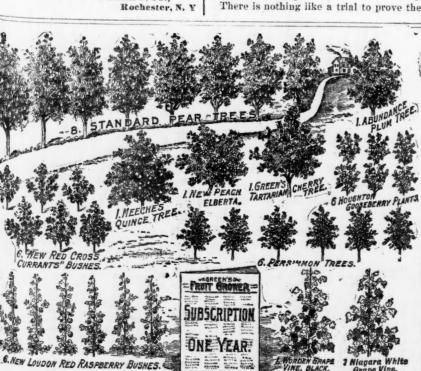
other crops.

some who cling to the old idea, and that too, in the face of improved methods of rulture. The tendency of modern agriculture is decidedly towards shallower and leveler culture. Indeed, it has already been adopted by the majority of progressive farmers and fruit growers. Deep plowing before planting farm crops, or before the roots of trees and berry plants have filled the soil is all right. Moreover, it is highly beneficial, because it makes the ground loose and porous just as deep as the plow goes. Soil so treated will be able to hold more water than that which is more compact below, because it was plowed shallow. After the soil is filled with roots it should not be stirred deeply, for that would seriously disturb them and check the growth of both root and top. A tree or plant may have too many or too long branches for our convenience of for its best fruitage; but not so with the roots. They are the feeders -- the obsorbing organs through which the nourishmen

leaf. They need every encouragement to grow. Plenty of moisture and suitable food will do that, and it will, at the same time, make the parts above ground grow correspondingly well. If the roots are not nealthy and vigorous neither can the top be so. One is dependent upon the other. Therefore, whatever plans will most effectvely, and, at the same time, most cheaply provide and maintain these conditions are those to be followed. These are deep and most thorough preparation and enrichment of the soil, followed by shallow but very frequent cultivation of the surface. Level culture will present less surface to the evaporating influence of the air than ridge or hill culture. In many cases it is not necessary to stir the soil more than an inch or two deep; but it must be done thoroughly. It should be made as fine as dust.

neath will remain. The philosophy is, that a dusty mulch acts as a non-conductor of moisture. Nothing is-more scientifically true; nor is there any principle of agriculture or horticulture as easy of practical demonstration. It has been proven true many thousands of times. There is nothing done on the farm that is of more importance to the growing of good crops of any kind.

There are many tools made to serve the ourposes of those who wish to follow out these ideas. We have subsoilers, scratchers, scrapers, rollers and grinders of almos every description imaginable. Any tool that will the most thoroughly pulverize the first two or three inches of the surface is the most useful cultivator. Last month Mr. Halliday gave descriptions and directions for using many of the best of them. None that I have ever used is of more general utility than the "weeders." We are now using one of the latest styles of this implement. It has flat teeth except at the points, and does better work than the round toothed styles; because there is less endency for them to spring sidewise. It s the best tool we have ever used on the farm. It takes such a wide land-71/6 feet and reduces the cost of cultivation of the orchards and fields to only a trifle of what it was with narrow tools. Nor does it hurt the plants in working ordinary crops; although the teeth pass through and over the hills and rows. We used it in covering our potatoes this spring; going diagonally both ways across the rows after the seed was dropped in the furrows. For keeping an orchard in mellow condition there is nothing better. I saw one of the best orchardists in Michigan using such an implement in his peach orchards. One of his men told me that with one horse and this tool he had gone over an orchard of 75 acres both ways twice each week that season except when it had rained and is a more satisfactory grower in every remade the ground too wet. Twenty-five acres per day can easily be covered. When I was there the soil was as mellow as a garden ought to be. For the last thirty years I have used a fork hoe in my garden and field work wherever hand tools were needed for hoeing. A blade hoe we rarely use for anything else than cutting sprouts from about stumps.



ALL OF THESE TREES, PLANTS AND VINES ARE OFFERED IN "MORTCAGE LIFTER" COLLECTION.

OUR SPRING CATALOGUE FOR 1899 be mailed you early in January, which will give LOW prices for this valuable collection. Address GREEN'S NURSERY COMPANY, ROCHESTER, N. Y.

value or defects of anything. We should lay aside our prejudices and give everything that appears at all reasonable a fair

The Philosophy of Cultivation.

Written for Green's Fruit Grower y our Regular Contributor, Prof. H. E. Van Deman, Late United States Pomologist.

The old idea was that the main benefit of cultivation comes from the killing of weeds. It is true enough that weeds are robbers of the soil and should be destroyed on sight, or more easily and profitably, be fore they are seen above ground. But con servation of moisture in the soil and subsoil is the chief benefit resulting from cultivation. Another of the old notions was that it required deep cultivation to keep crops growing. The plow and the big single and double shovel plows were used almost entirely in working corn and all The orchards and berry patches were also worked with these tools My father was one of a few who used to harrow his corn and potatoes just before and soon after they came up, but he was considered a little "cranky" by some of the Now all this is changed, except with

neighbors, in trying new fangled notions.

is taken into the circulation of the sap and thus distributed to the remotest twig and

and the dryer it is the moister the soil be-

Prof. W. H. PEEKE, F. D. 4 Cedar St., N. Y

trial. It might seem that a box with stones in it, rigged so as to be dragged along garden and orchard rows would not be a good clod-masher, but it is, and I have een it used with excellent results. Let me urge those who have not faithfully tested the dust mulch in the orchard berry patch, garden and field, instead of the old system of deep cultivation, by

> Grand Rapids, March 26, 1899. Editor Green's Fruit Grower:

Editor).

Editor Green's Fruit Grower:

and also with other fruit trees; that he

had found the use of these very valuable

indeed to incorporate in the soil about

fruit trees and especially pear trees. He

thought it had a remarkable influence in

guarding against blight and improving the

He remarked that the venerable Mr.

Wilder, president of the American Pomo-

logical Society, had stated to him very

many years ago that one thing we needed

out here for success in the growing of

pears was more iron in the soil; that in

New England they had a considerable

amount of it in the soil—in some places all

they needed: where not as much as needed

it was advantageous and profitable to ap-

ply it. Mr. Furnas remarked that it had

been his habit to secure a quantity of tin

cans, any iron scrap waste, and dig it

into the soil about his trees, that he had

To this treatment and to the spraying of

his trees with Bordeaux mixture he had

attributed his freedom from pear blight.

son he found only one small branch that

showed the slightest trace of blight. He

also uses red vermillion and a little boiled

amount of farm machinery that is lying

waste on almost any farm in the country

could be utilized to better advantage in

burying it in pieces under fruit trees than

to sell it to the junk man for \$5.00 per

Idaho Pears and Others.

Dear Sir.-I am more than pleased with

pear trees I purchased two years ago. I

planted on what neighbors called a clay

knob (sandy yellow clay) sloping to east

enough to seldom let water stand long;

got 210 trees in all; three died last year.

Two years from planting we had over 100

trees in bloom, but the cold, rainy spring

spoiled some. We saved on 10 Dwarf

Duchess from three to five pears, some

weighing 15 ounces to the surprise of

neighbors. One D'Anjou had 30 pears.

We ripened 10-very good. Five Bartlett

Seckels ripened each from three to eight

large specimens, but the best is to come.

We ripened one Idaho of 14 ounces, the

only one in busy time. It got ripe on

tree. We kept it one week then ate it up.

I am a lover of pears and good pears, but

we could not help but say that this was

the best flavored and finest grain pear we

ever met. I have 20 trees and agents say

they blight badly. I hope not. Have had

no sign of blight on any and I have quite

a variety of Dwarfs and Standards. I

have Wilder, Bartlett, Bartlett Seckel,

Vermont Beauty, Flemish Beauty, Idaho,

Kieffer, Duchess D'Anjou, Garber, Shel-

don, Howel, Marguerite, Lincoln, Law-

rence, Clairgeau. All have made good

growth. I have cultivated with disc and

harrow till last of June. The middle of

July cut back two-thirds of new wood to

get good shape, low tops and bless you if

you were to see them all full of butts.

Expect some fruit if nothing happens. The

currants and gooseberries are doing fine

So did Worden and Moore's Early.

and grapes done all they could two years

Last two seasons were hard on English

If this helps the Green's Fruit Grower

you may use it, or if you wish send for

more information .- Yours truly, A. S.,

Advice Wanted.

Enclosed find note about currents and

raspberries, and I wish to ask for a bit

of advice. My husband has just pur-chased three acres of land, and it lies

has a gentle slope to the south, a little

portion being on top of an exposed hill with little or no timber to break off hard

winter storms. I am planting a small

order of trees for home use on the slope,

but they don't cover one-fourth of an acre I want to put out small fruit for the Bal-

timore market to sell direct to consumers

for jelly and preserves. I have had only

small garden experience with fruits, and I do not know just what kind will do the

best on this soil or which varieties are most profitable. We have a red clay sub-

soil, with sandy loam, very light and quite

a good deal of gravel in it, together with

fragments of iron ore. On land adjoining

the ground is a sort of red clay loam, very

gravelly, scarcely bearing a decent crop

of weeds. Our ground is fairly good, but

will need considerable bringing up. Now, I have an idea that the side hill (where

the most of the stone is) will be suitable

for grapes-Concords and Pocklington per-

haps. Then on top of the hill on the level

bare of trees or fruit of any kind.

Editor Green's Fruit Grower:

from planting. Moore's Diamond

gooseberries. I lost some.

Fort Wayne, Ind.

quality of the fruit.

found it a marked benefit.

moth, and other insect enemies.

ton.-E. F. Stephens.

Mr. C. A. Green:

The failures of apple crops in recent years have been largely due to the destructive action of the apple scab fungus. This is shown by the fact that sprayed trees have often yielded fruit when others were barren, or partially so. In one case valuable a sprayed tree gave about \$3.00 worth of which I have planted to peaches. Would fruit more than an unsprayed tree alongt be a good idea to put three or four shovels of clay soil in the holes you dig The trouble seemed to be at its worst

which the roots are broken and the land

thrown into ridges, try it this year.

in 1893, with some improvement in 1894, and disappeared almost wholly in 1895. The cause of its cessation was the continued dry weather.

This condition cannot be expected to prevail beyond one or two seasons, and the former state of affairs may return at any The office of a fungicide is to prevent

course to pursue is to take advantage of the present conditions, and to seek to hold the disease in check, by spraying. It is advisable to spray young trees just planted, as well as those that are in

the growth of fungi, hence the proper

bearing. Two applications of Paris green have not kept the apple worm in check, but the past season four sprayings gave quite satisfactory rogulta

In spraying apple trees for the scab it is well to do as much of the work before the time of blooming as possible, and as little after that time as need be, because the mixture injures the appearance of some

kinds, if used too late. The Belmont, Benoni, Ben Davis, Early Harvest, Maiden's Blush, Newtown Pippin, Northern Spy, Rambo, Red Canada and Rome Beauty, are greatly benefited by applications of Bordeaux mixture.

Baldwin, Grimes' Golden, Jonathan,

Peck's Pleasant, R. I. Greening and Roxbury Russet have not shown much im provement under the treatment. Nearly all varieties of pears are im proved by spraying, but not all in the same manner, and some are injured by late

applications. Bordeaux mixture is beneficial to plum trees, and the curculio may be held in check with Paris green, but the difficulty is increased in proportion as the plum trees are surrounded by other trees which har bor the curculio. At present it seems best to fight the curculio both by spraying and catching.

Peaches and American plums should be sprayed with half strength mixture, if applied when in leaf.

The most useful fungicide is the Bordeaux mixture, and in making it an excess of lime is advised. Copper carbonate and potassium sulphide are useful in a limited way, to replace the Bordeaux mixture where it cannot well be used.

Apple and pear trees should be sprayed with Bordeaux mixture twice before blooming, and once or twice after, according to variety, using six ounces of Paris green to a barrel of the mixture, the third and fourth times. Two more applications of Paris green, four ounces to the barrel, re advisable in some cases.

Three or four applications of Bordeaux mixture and Paris green are advised for plum trees, after blooming, using the curculio catcher still later. Two sprayings, half strength, of Bordeaux mixture and Paris green combined,

are advised for cherry trees, after bloom-Grape vines require three or four spray ings with Bordeaux mixture; two before the fruit sets and two after; and two applications of copper carbonate still later. Raspberry plants should be sprayed once before the leaves open, with Bordeaux mixture, and the young canes two or three

times later, with the same, half strength.

Either Bordeaux mixture or potassium sulphide may be used for the mildew on gooseberry plants, and white hellebore for the currant worm. A spray pump should have the parts with which the mixture comes in contact made of brass, or some material which will not corrode. The appliances needed for spraying large trees are about twentyfive feet of good rubber hose and ten feet of tubing, on the end of which the nozzle

is fastened. A large air chamber is help-

ful, and some form of an agitator is nec-

essary .- Ohio Experiment Station Bulletin.

Loudon Red Raspberry in Ohio.

Mr. Read: Professor Green has asked whether there was a difference between the Loudon and the Cuthbert. The differ ence is this: the Cuthbert without protecion is no use in the North, and the Loudon

spect, and perfectly hardy. Mr. Farnsworth: There is another re spect in which the Loudon excels the Cuthbert, and that is the case in picking the fruit. The Cuthbert grows exceedingly rank, and it is very difficult to pick. In the Loudon the fruit is more exposed to view, being of a more dwarfed growth, and more productive. I have heard reports that the Eureka black raspberry was difficult to establish, but that has always seemed strange to me, because it is so much at variance with my own experience. I have secured better results with it than with any other berry I have ever planted. From Ohio Horticultural Report, 1899.

-"The lighting of a room," says the Pharmaceutical Era, "depends, to a large extent upon the color and the material of the walls; in other words, upon the percentage of light reflected by them. Recent experiments have shown the proportion of light reflected to be in percentages as follows: Black velvet, 0.4: black cloth 1.2; black paper, 4.5; dark blue, 6.5; dark green, 10.1; light red, 16.2; dark yellow, 20: blue, 30: light yellow, 40: light green, 46.5; light orange, 54.8; white, 70; mirror,

When I say I cure fits I do not mean merely to stop them for a time and then them return again. I mean a radical cure. I have made the disease there are "washes" on the side hill and of Fits, Epilepsy or Falling Sickness a life-long study. I warrant my remedy to cure the worst cases. Because others have failed is no reason for not now receiving a cure. Send at once for a treatise and a Free Bottle of my infalliole remedy. Give Express and Post



Loudon Reds in this order I intend to plant on side hill unless you tell me they will succeed on the top of the hill. Will you please answer through your paper: I have a sandy farm

Please advise me how I can plant for success and profit, and best preparation of ground. So far I have plowed and harrowed it only .- Very respectfully, Mrs. H. B., Md. to plant the trees in? I expect to plant more and would like to know if you (Reply: I should judge that your soil would be desirable for many kinds of large

hought that would help the trees. I and small fruits, providing you keep it in have been a reader of your paper for five years and would not give it up. An old good neart. You cannot grow good fruit subscriber. Yours, F. G. H. (Reply: I should never place heavy, manure will improve your soil very much. Do not be afraid of the elevated site of sticky or lumpy clay near the roots of the hill. This may prove to be even betany tree or plants. A few shovelfuls, or ter than the other portions, particularly more, of fine, loose, friable clayey loam for grapes. Concord, Worden and Niagplaced about the roots of your peach trees ara are good varieties.

would be helpful, but not strictly neces-I succeeded when I began fruit growing sary if your soil is fairly rich. If not rich. by having a general assortment of small mulch of a few forkfuls of manure and large fruits. Strawberries are deplaced around the tree after it is planted, sirable because they come into bearing on top of the ground, would act as a mulch quickest of all. Raspberries, blackberries and assist the tree in getting a start .and currants also bear quickly, more so than grapes or trees. Do not fail to plant some strawberries. Loudon red raspberry Iron Shavings for Fruit Trees. gives satisfaction everywhere and is undoubtedly the best of all red raspberrries. Riding on the train with ex-Governor The land on the side hill will wash unless R. W. Furnas yesterday he remarked that the rows are run sideways of the hill. he had just visited the machine shops of This washing of the soil of side-hills is the Dempster Manufacturing Company at the greatest objection to them and you Beatrice and saw there a great quantity have to take this into consideration in layof filings and shavings of iron, and he was ing out your land, and marking out your reminded that many years ago when they rows, since the water will follow the path had machine shops at Brownville he used of the cultivator.-Editor Green's Fruit the shavings from turning lathes and Grower). filings and iron waste about his pear trees

> Effect of Soil and Fertilizers on Fruit.

Editor Green's Fruit Grower:

We see editorial on pages 6 to 8 in the March Fruit Grower. Does the soil affect the quality of varieties of apples?

Here is our experience: We planted two peach trees in the garden soil and two n the same soil, only there had been leaches from soap making thrown at one side three or four years before the two seedlings; in four years all were full of peaches. 'The ones planted in the common garden soil were small, just ordinary seedling, free-stones of light color and sweet. The two trees in the ashy soil not over ten feet apart were ten days earlier, of the same color, but oh such delicious, juicy sweet; would melt in your mouth and fully three times as large as the others. We know the seeds were all from the same In an orchard of 700 pear trees last sea- tree. We sent six to our State nursery, one hundred miles east of us for a name. The Louisiana in this State on the Mississippi River. They wrote us that they oil to coat the trunks of his pear trees. never saw anything like them for size, He thinks there is something in that. He | quality or color in a September peach. We also thoroughly believes in spraying to would have sent them to you but they guard against fungus diseases, codling were too tender for so long a journey. The high wind nearly destroyed them two Doubtless the iron parts of the great | years ago and this severe winter has killed all of the old parts of the trees. We will set some more in their place. We planted some raspberries near the trees on the same ground and they changed as much as the peaches. Now if this is of importance to the fruit growers use what is my experience. We are spreading leached ashes between the rows of pear trees we got of you. They are not in bloom yet, but made fine growth last year. The Baldwins are fall apples with us and are firm but shy.

The Northern Spies are fall apples and cannot be kept long .- Respectfully, H. (Reply: There is no doubt that soil does affect the quality of fruit of all kinds, also that different kinds of fertilizers affect the quality, firmness and long-keeping characteristics of fruit. We doubt, however, in your case, whether the marked difference in the size and quality of the fruit was caused entirely by the soil and fertilizers. Since the trees were from seedlings, it seems reasonable to suppose that there was a difference in the varieties of the peach trees that bore different kinds of

> -Tools in Pocket.

fruit .- Editor Green's Fruit Grower).

Man without tools is helpless. What was the value of an ax, a saw, or a knife to Robinson Crusoe, who was cast away upon a desolate island? Without the ax. the saw, or the knife Crusoe could not build, could not prepare wood for the fire, and without the knife he must indeed have been lost.

There are many people who do not carry a knife in their pockets. Such people seem to me to be shiftless, but possibly they are not. I could not get along an hour without a knife. I must have a knife to sharpen my pencil, to clean and pare my nails, and for dozens of other kinds of work that occur every hour of the day.

I have always been the owner of tools of all kinds. Since childhood I have owned a set of carpenter tools, and I have found that they more than pay for themselves every year. I cannot endure seeing things about the

house, or barn, or other buildings, out of order. Eyery door, window and blind must be in perfect order, and to keep them so requires constant supervision of a man with tools. I will not allow my men to use reapers, mowers, drags, cultivators, plows and wagons unless they are in perfect condition. I instruct my men to over haul these items twice a year and have them put in perfect order. It injures a machine more to work it only for half an hour when it is out of order than to work it a week when it is in perfect condition. Among useful tools I would suggest the Levin pruner, a light implement that can be carried in the pocket much as you would carry a knife. During the fall and spring and even in open days in winter, I have a pruner of this kind in my pocket, and since I am constantly moving about my vines, fruit trees and ornamental trees and bushes, continually find something that needs pruning. Even where I have pruned before, in wandering among these bushes or trees. I find an additional branch that needs cutting out, or short-

The past few days of April have been sunny and bright, and it has been a pleasure for me to wander among my trees and vines. I found my Norway Spruce growing in a group of perhaps a hundred, in the center of a large lawn, getting too high, and I cut back the leading shoot ene-half. It is surprising how this cutexposed portion I would try currants and ting back of just that one shoot which Please Mention Green's Fruit Grower. a hardy variety of red raspberry. The makes the trunk, lessens the height of the

tree. I can make my Norway Spruce of almost any shape by pruning them at this time of the year, cutting back the leading shoots not only at the top but all round the sides. This cutting of the spruce causes the branches to become thick and more compact, and less wide-spreading. I do not favor cuting back on all sides every year, but it may be done once or twice during the life-time of the spruce in its early days with benefit. I do not however, cut back all my spruce in this

way, but leave some to grow naturally. In wandering among my trees, etc., find the pear, plum, or apple, with one or more shoots growing too vigorously up right, needing to be headed back on newly planted trees. Many of these trees I head back by cutting off one-half of last sea son's growth on every branch.

Among the ornamental shrubs I find i most every case a few shoots which need cutting back, so as to maintain a well proportioned top of the bush. My rose bushes need cutting back every year. Unless the rose bushes are climbers they should be cut back every season before the buds open; sometimes one-half its growth, sometimes only one-third, depending upon the vigor. If dead canes are present they should be removed, and if there are more than three or four strong flowering canes, the weaker ones should be cut out. Flowering shrubs should be kept within bounds by cutting back the heads somewhat each season, otherwise they become too tall and straggling. If the bush gets too high part of the canes can be cut back fully one-half this spring, and next spring the remaining cane can be cut back the same distance. No fruit grower can hope to success without having in his pocket a sharp knife

and a good pair of pruning shears .-Editor Green's Fruit Grower.

-The world's record for kite flying was broken at the Blue Hill observatory, near Readville, Mass., on February 28th, when 12,507 feet above the sea level was reached by a recording instrument at tached to a string of tandem kites. This is 383 feet higher than the preceding best record made at the same place August 26th last.

-Boenholm, an island of the Baltic Sea. ninety miles east of Zealand, is formed of magnetic rocks. They so affect the compass that navigators when in their vicinity have to rely upon stationary objects for steering guides. One submerged rock is so charged with magnetism that the compass on a vessel passing over it dips perpen dicularly downward.

Delay is Fatal.

To delay starting the Weeder until the weeds have a good start is fatal to secure the best results. We cannot emphasize trees had been planted; all four were this point too strongly. Many farmers fearing to hurt the crop, wait until the crop and weeds have a good start and then blame the Weeder because it does not do what it was never designed to do. Start the Weeder in time and if the ground was even half way decently prepared, it will do all anyone ever claimed for it.

> "Best Blister | Ever Used." Flushing, N. Y., Dec. 1, '98.

THE Lawrence-Williams Co., Cleveland, O.: Some time ago I purchased a bottle of your Gombault's Caustic Balsam to use on my trotting mare for splint, which cured it in short order. I have recommended "Gombault's" to a number of orsemen in this vicinity. It is the best blister I have ever used. Have kept horses for the past twenty years, and good ones at that, and have had considerable experience with blisters.—C. D. Bellows.

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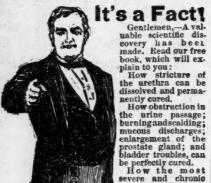
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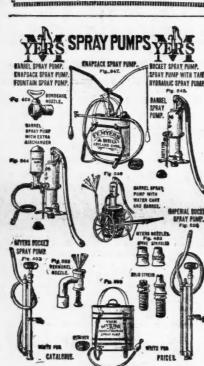
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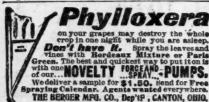
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SPRAYING.

Spraying and Our Spraying Issue.

It has been the custom of Green's Fruit accordance with this custom, the present

issue has much to say on this subject. The spraying calendar, which we have ublished each year and which we publish herewith should be placed where it can be easily referred to by every fruit grower, so that he may know when to spray, how to make the spraying solutions, how to apply it, etc.

The spraying of trees and plants has marked an important era in fruit growing. We know of no one discovery of the subject of spraying and all fruit growers should be wide awake, and actively interested in the subject.

As an illustration of the importance of spraying, I will call attention to the fact that near Rochester, where the Northern Spy apple is usually successful, bearing large crops of handsome and delicious fruit, there are special seasons when the Spy apple trees bear a worthless crop of small, knotty, gnarly, inferior specimens not worth gathering, owing to the attack of apple scab, which in some warm, moist seasons is far more destructive than

Before we began to spray our apple orchards, we would have one season Spy apple trees loaded down with the largest, fairest and most beautiful specimens of fairest and most beautiful specimens of fruit, and the next year as heavily laden University, by Prof. Bailey: "Gentlemen," with insignificant, knotty, gnarly specimens. But since we have begun to spray our orchards intelligently, our Spy apple trees bear more uniformly fine crops of superior fruit; not only this, but the foliage of the trees is healthier and more perfect when the trees are sprayed with Bordeaux mixture.

Pear trees can be profitably sprayed. The seckel pear is particularly liable to attacks of the scab fungus, which causes the fruit to be small and imperfect. A few sprayings at the proper season makes the fruit fair, and judicious thinning later will make it large. Dwarf Duchess pear is liable, especially on low ground, to be covered on one side, or more, with a russet, or rough skin. This can be greatly modified or entirely avoided by spraying. Plum trees sometimes shed their leaves before, or soon after, the fruit ripens, owing to an attack of fungus, the same is true of the quince. The remedy is to spray with Bordeaux mixture as per spray | and expense, and of the expected improved

Spraying for Peach Leaf Curl.

Many correspondents have written us during the past year asking information in regard to their peach trees, the leaves of which had curled and were falling. The trouble was owing to the peach leaf curl, which was worse last year than ever before known to the writer. I have known in other seasons a slight attack of peach curl, after which a few leaves would fall, but new ones soon came out and the crop would be uninjured. But last season the peach trees were almost entirely defoliated, and the crop in some instances was destroyed by the peach leaf curl.

At Green's fruit farm we sprayed the trees with Bordeaux mixture after we noticed the curling of the leaves, but this did not seem to give relief. The leaves fell, also the fruit and the orchard looked for a time as though it had been swept over by a fire. But later a new growth appeared, with new and healthy leaves, and by September the trees presented a thrifty appearance.

Experiments have shown that peach growers should not wait until the trees leaf out before they spray with Bordeaux mixture. The present method is to spray just before the buds begin to open, and again, with a weaker solution, as soon as the petals of the flowers have fallen, and again when the first leaves are full grown.

Up-To-Date-Spraying.

From M. GOLDMAN'S Address

Spraying came to stay because the present demand for perfect fruit calls for it, ecause you have to spray every year, and the reason you have to spray every year is, because the demand for perfect fruit

grows every year.

The call for nice, fully developed, well ripened potatoes, free from blight or scab growing, and to supply such a demand

you must spray. The use of Paris Green and plaster is thing of the past. The use of London Purple or any dry powder insecticide is a thing of the past, because it cannot be mixed You have no means of knowing whether your work is right or wrong. It is all guess work, and trusting to luck. London Purple is a refuse from a dye product, and its efficiency varies. Sometimes, so very strong, that the arsenate will burn your vines, at other times so weak that your time and expense is a mere waste, and the same in the case of Paris Green, no matter whom you may buy it through blossoming. "Never spray while from, and no matter how large the type on in blossom." Third spraying to be done its label emphasizes its purity as PURE in about eighteen to twenty days. For PARIS GREEN, you never know when it is pure. You have to trust to luck, and it is a thing of the past to trust your crops to luck. To raise good crops, you must be positive of your work; you must know what you are doing. Bordeaux is positive. Bordeaux is recommended by the stations,

while all the patent powder insecticides are discarded. It is because they are unreliable. If too much is used it will scorch the vines, if not enough the bugs can make out a good neal without getting the effects of the arsenate, and your vines will suffer. If you do succeed in killing the bugs, you have only saved your crops from destruction by the bugs, but you have not insured it against blight. Another reason that it will not be effective, is because the least wind will blow it off, so much so that you are obliged to get up early in the orning to apply it while the dew is on. For a tenement man who has a small patch of a garden it may do very well, but for a large grower, or on a large place, it they were just as well satisfied. They is altogether impracticable, for the poison should be put on while the sun shines, for then the bugs are out feeding. This is the he had a mind to use it, and the largest reason the agricultural stations and colleges strongly advocate the use of Bordeaux. It being a fungicide and a preventive to blight, and if you prevent

blight, you prevent rot. What is blight? Blight is caused, in the foliage; the injury once there, the spores finding favorable resting spots on the affected places of the leaf, hot, dry weather favors its development, and is usually more severe where the potatoes are planted in dry soil. But it has been known for blight to attack and destroy a field of potatoes in moderately cool weather. Any plant once weakened, even by an ever so inpin-hole caused by some means (of course one pin-hole will not affect a field of potatoes), but when there are millions of these first place, by the flea beetle injuring the

little rascals in the fields busily making you are going to scrape your trees, do so these pin-holes, the plants are subject to now, during the fall and winter, while the the attacks of blight, by the changes of the weather. Strong, healthy, growing plants may be entirely free from attack. It is then evident that it is better to spray for prevention rather than cure, for once blight gets started it is hard to check it. It is possible for blight to attack a field Grower to issue every year at this season a paper devoted largely to spraying. In owner, it being mistaken for an early maowner, it being mistaken for an early maturity. This is the reason so many potato crops rot in the field, and, if dug early, because of the supposed early maturity, they

then rot in the cellar. Since it is evident that blight is attracted to plants which have, through some cause or another, been weakened or injured, it should be borne in mind that the treatment should begin in its early stages, as soon as the vines are from four to six inches above the ground. The Bordeaux forms a film of copper over the leaves, and thus pregreater interest to fruit growers than this. vents the injury by the minute insect in There is, however, much to be learned on the first place, and injury by the changes of the atmosphere.

Four to five sprayings during the season will insure a healthy crop. Once your potatoes are brought up healthy, it is hard for any disease to take hold of them. What does spraying mean? It does not beans, by the means of some kind of a towns for washing buggies, wagons, etc. Neither does it mean that an ordinary cheap pump in a barrel with a nozzle on an end of hose, and a return hose throwing a return stream into the barrel will do it. All this sort of spraying is merely trying to spray, or imitating the real spraysays he, "this is only sprinkling. If you are going to spray you must do it right, thoroughly, and honestly, in the prope

way and in the proper time, or not at all.' To receive the full benefits of spraying, says Prof. Bailey, you must be fully equipped with the very best of a spraying outfit, provided with a mechanically built agitator within the barrel, so that the Bordeaux will mix thoroughly and uniformly, and be held in suspension while the spray leaves the nozzle. The nozzle must send out a very fine spray, which must come with force. It is also necessary that the spray should reach the under sides of the leaves as well as the tops; every branch and twig, and also the crevices of the tree, must receive the poison. I would also emphasize, right here, that the proper spraying in the improper time is equally as bad as no spraying at all; and that the improper spraying at the proper time is just as bad, because you are out of your labor

What is fungi? An insect deposits its poisonous secretions upon a tree, or plant, or upon fruit. The spot receiving this poi son is like a mosquito bite on your hand. It raises a lump or a shallow blister. The only difference there is, is that while you get one bite, the tree gets ten thousand bites, perhaps, and that you relieve yourself by scratching, or, in bad cases, by washing the affected parts with saleratus water, while the tree has no means of scratching itself, and Bordeaux is the only wash for it. See the importance of spraying for fungi. The Bordeaux leaving a thin film of copper on the plant, prevents the insect poison from penetrating into it, and the occasional showers wash off all such deposited matter and the tree is freed from

the poison. I would also recommend that, after re moving the loose and shaggy bark and cleaning out all the wormy eaten refuse from the holes in the trees, which should be burned up and not left near the tree, to paint the trunks of the trees with B deaux, mixing it to a consistency of thin paint, using a stiff painters' brush. It is a little work to do, but you are doing it for yourself, and your own benefit.

I venture to say that if the beautiful elms which adorn our beautiful streets, in front of our beautiful residences, in our own city of Pittsfield, were cared for and sprayed, as they did in Albany, Troy, Springfield, New Haven, Hartford, and many other cities, many of the old, noble ooking elms, gracing our streets, would be

But it seems that that which should be verybody's business is nobody's, but very often nobody's business is everybody's. Let an individual have one diseased tree in front of his residence, and every by-passer comments upon it.

When is the time to spray and scrape trees? Scraping the trees, if the weather permits, is best done in the fall and winter while the trees are dormant and free from leaves,-thinning and pruning should be done in the spring-but it can be done any time, even in the winter is better than not at all, or even when in full leaf. They should be scraped as high as can easily be reached, at least up to the crotch of the tree. The turf around the base of the trees should be cut about eighteen inches or more around the tree and removed. This will free the tree from any possible larvae that might have gathered, and are there in pupa state wintering.

First spraying should be done early in the spring, before the buds break, and must be done well and thoroughly. Second spraying to be done after the trees are spraying to be done in about three weeks again. To know when the tree has been sprayed enough, quit when you see drops hanging from the branches and limbs, and proceed to the next. Of course, spraying means extra labor and expense, but that is very trifling when compared with the quantity and quality of fruit you receive

in return. One man told me that he had put eight barrels of apples down in his cellar, but of poor quality, and that he had about eighty bushels of cider apples that were not worth gathering. The gentleman who told me so is, I think, here, and would no doubt verify this statement, although his trees are the best of any I found around here. He had them scraped and they were cleanly looking and evidently appeared as if prepared for good fruit, but he did not spray and the young larvae did not hesitate to crawl up the trunks of the trees, even over the smooth surface, as they knew there was no Bordeaux there, and worked on shares. Gave him eight barrels for his cellar, eighty bushels for cider, if portion of the best they consumed. This goes to show that a tree partly treated is a waste of time and expense, but if you want good fruit you must do it thoroughly

and honestly and give it full treatment. Now, gentlemen, can you blame your fruit trees for producing poor, wormy, and blighty fruit? Can you blame your elms for not holding up their leaves and keep-

trees are in a dormant state. Rake and brush away all the dead leaves and rubbish, and thoroughly clean the entire grounds of your orchard, and particularly

around each tree, ornamental or fruit. Gather it up and burn it. Do not leave it near your trees or in the road-way, but burn it up. This will prevent the eggs deosited during the fall, or the insects in the pupa state from breeding in the rubbish and returning to your trees. If you have a dead tree here and there, or one badly diseased in your orchard, or near it. you had better cut it down and set fire to it, so as to avoid the spreading of its disease to other trees.

Gentlemen, why not lend your orchard fifty dollars or a hundred, it will pay you oack ten times over with good interest on the top of it.-the safest and best loan you can make.

California Fruit,-Passing a fruit stand in the cities, the wonderfully large, smooth and delicious looking fruit makes one's mouth water; the plums, the peaches, the pears, which sell 2 for 5, wrapped in tissue paper, indeed its size and color deserves its wrapping, people pay for it most willingly. The beautiful and tempting lookmean squirting poison on your trees, or on ing cherries that reach our markets your potatoes, or on your cabbage or your packed in 10 pound boxes in artistically arranged layers or rows are generally sold squirting pump, green house syringe or before they are unloaded,—and why? be-bucket pump, such as is used in country cause they spray and take care of their before they are unloaded,-and why? beorchards, which is the main secret of the Californian successful fruit grower. One will readily notice that the "2 for 5" goes faster than the "3 for 1," at any fruit stand.

(Continued Next Month.)

Three Hundred Varieties of Flower Seeds Free, by Mail.

Green's Twenty-days' Offer.-Chas. A Green offers to send by mail, post-paid, a packet of mixed flower seeds, containing over three hundred varieties of flowers, on the following terms:

He will mail you the above seeds free on receipt of 35 cents for Green's Fruit Grower for nine months to January 1st, 1901.

He will mail you the above seeds free upon receipt of 25 cents for any of his books, which are also to be sent by mail. postpaid. These books are, first, Green's American Fruit Growing; second, Green's American Poultry Keeping; third, Green's Six Books on Fruit Culture: fourth. Green's Four Books on Fruit Culture fifth, Green's How We Made the Old Farm Pay. Remember, this offer is good for only

twenty days. Send for it at once if you desire it. This is a very attractive offer, and the seeds we shall mail you will give you great delight and comfort.

Spraying Advice.

C. A. Green: I would like if you would give me a little advice about my fruit trees. About three years ago I planted several choice fruit trees; they have done nicely. But last year the Elberta peacher blossomed and fruited and when the fruit was about the size of a hickory nut they blighted and dropped off and the leave curled up and dropped off also. Now what can be done to prevent it? The plum bore well but when about the

with the peach curl, which was more de remedy is to spray the trees with Bor in our spray calendar in this issue .-Editor).

If you want the best low down wagon you should buy the Electric Handy Wagon. It is the best because it is made of the best material; the best broad tired Electric Wheels; best seasoned white hickory axles; all other wood parts of the best seasoned white oak. The front and rear



supplied without additional cost when requested. This wagon is guaranteed to carry 4000 lbs. anywhere. Write the Electric Wheel Co., Box 91, Quincy, Illinois, for their new catalogue which fully describes this wagon, their famous Electric Wheels and Electric Feed Cookers.

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Tools. Se Send stamp for Catalogue to
Great Western Gun Works. Pittsburgh, Pa.

LEGGETT'S ANCHOR BRAND WHALE OIL SOAP FOR SPRAYING TREES. Destroys

same size as the peaches they dropped off too, and so did the leaves. What shall I do to prevent my pears from being knotty? From an old subscriber, Clarendon, N. Y.

(Reply. Your peach trees are affected structive last year than ever before. The deaux mixture twice before the trees leaf out (see editorial). Your plums trees are also affected with leaf blight, and the spraying with Bordeaux mixture in July or as soon as they are at all specked will give relief. The spraying with Bordeaux mixture for the pear trees will also guard against the attacks of fungus on the fruit. which causes the fruit to be knotty. For full particulars about spraying, with formulas for mixing, everything will be found

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AMERICAN FRUIT GROWING is now ready for distribution, price 25c., post-paid; or, we will send this book as a premium to all who send us 50c. for GREEN'S FRUIT GROWER for one year who will mention this premium when subscribing.

This new book, under strong paper cover, contains 124-pages, devoted to Pear Culture, Peach Culture, Manures and Fertilizers Ouince Culture, Currant Culture, Small Fruit Culture, Western New York Fruit Growing, Cherry Culture.

Address Green's Fruit Grower, Rochester, N. Y.

SPRAY CALENDAR.

PREPARED BY W. J. GREEN, A. D. SELBY AND F. M. WEBSTER, OF OHIO AGRICULTURAL EXPERIMENT STATION. This Calendar is designed to cover the needs of Orchardists. It was first prepared at the request of the Ohio State Horticultural Society. Insecticides and Fungicides may often be combined. Where Bordeaux mixture is used for fungous diseases this practice is recommended. Spraying young orchards with Bordeaux mixture from time of planting and of stocks in nursery row, is strongly recommended to preserve healthy conditions.

WHAT TO SPRAY.	FOR WHAT TO SPRAY.	WITH WHAT TO SPRAY.	WHEN TO DO SPRAYING.				REMARKS AND
			First Spraying.	Second Spraying.	Third Spraying.	Fourth Spraying.	CAUTIONS.
Apple		Arsenites in Bordeaux Arsenites alone, 7 or 8		In 1 week if worms	Same as second		White skinned appl are injured t spraying after 3d.
	Codlin moth	Arsenites in Bord. I Whale oil soap solu- tion	After blossoms fail As soon as leaves drop in fall	7 to 10 days later	These coincide with	3d and 4th for scab	One and one-half
	Woolly aphis	Kerosene emulsion		In Spr			solved in one galle water.
Cherry	Rot (7)	Bordeaux I and II Kerosene emulsion	Before blossoming I On first appearance of	After bloss, drop II,	Two weeks later II on fruit	Two weeks later II or 3	Don't use emulsion full leaf. Use 3 when fruit
	Cherry slug	Arsenites in Bord. II.	aphis When slugs appear	Repeat if slugs re-			Difficult to reach
		Arsenites in Bord. I and II	1	in II	One week later in II.		Air slaked lime man be used. Avoid strong solution
Currant	Plant bug	Kerosene emulsion	May	As with the apple Early June if neces- sary	1		
	Worm	White hellebore	When worms first appear.	In 3 or 4 days repeat.	Repeat as second		
Gooseberry	Worm	White hellebore	Before leaves open I. As on currants	After blossoming I Just before blossom-	Potass. sulfid 2 weeks		Bord. coats fault used for 3d.
Grape	Downey and powdery			ing	Just after fruit has set	10 days later, Bordeaux	Don't spray after
, and a second	Rot	Bordeaux I	Just before blossom- ing Just before buds open.	After fruit has set Just before blossom-	10-14 days later		fruit is half grown Covered by spraying for anthracnose
* *	Y	-	Potent and the	ing	Just after fruit has	10 days later, Bordeaux	Follow by 2 or
Peach	Leaf curl	Kerosene emulsion Bordeaux I and II or copper suifate					sprayings with an cop. carb, Don spray after fruit half grown.
			sol	Just after cal. drops Bord. II	Later not required		Second even probable
	Pustular spot Bud moth San Jose Scale	Whale oil soap solu-	Just after calyx drops With opening of buds. As soon as leaves drop	1	Two weeks later		Cover fruit well. Use only one-half usual amount of
Door	Bud moth		in fall	Just before fol. starts in spring			poisou.
Pear	Canker worm Codlin moth San Jose Scale	Arsenites in Bord. I Arsenites in Bord. I	As with the apple After blossoms fall As soon as leaves	7 to 10 days later			
Plum	Shot hole fungus	Bordeaux I	When leaves are half	Just before fol. starts in spring			One and one-half t
1	Curculio	Arsenites in Bord. I	With starting of buds.	Just after calyx drops	Three weeks later, if needed		solved in one gallot water. Jar and gather stun
Potato	Late blight		As for early blight in	Two weeks later	Two weeks later	Two weeks later.	plums in addition.
	Blister beetle Colorado beetle	Bordeaux I	When beetles appear. When beetles or young appear.	Repeat if necessary	As for first and sec-		
Julnee	Flea beetle Leaf spot	Bordeaux I	When beetles appear. As buds are swelling.	Repeat if necessary When leaves are half	ond		
laspberry	Fruit and leaf spot	Bordeaux I Bordeaux I and II	Before blossoms open. Before leaves open	After blossoms drop.	Two weeks after sec-	Two weeks later	Second should come after blossoms drop
and Blackberry.	Saw fly	Pyrethrum or helle- bore	As for current worm.	II on young canes 6 inches high	Repeat second one week later		Keep spray from leaves on bearing canes.
FUNGICIDES. 1. Bordeaux Mixture I.		definitely in a covered added. Such a solution solution and two or four solution according to are taken for each 50	is known as a stock r gallons of this stock the strength desired.	4. Copper Sulfate Solution. Copper sulfate, 4 pounds.		7. Paris Green. In combination with Bordeaux mixture	

Bordeaux Mixture I. Copper sulfate (blue vitriol) 4 pounds. Quicklime (not air slaked) 4 pounds.

Water, to make 50 gallons.

Dissolve the copper sulfate in about two gallons of hot water, contained in a wooden vessel, by stirring, or even better, by suspending the sulfate contained in a cheese cloth sack, in a large bucketful of cold water. With the cold water and cheese cloth bag, a longer time is required. Pour the sulfate solution into the barrel or tank used for spraying, and fill one-third to one-half full of water. Slake the lime by addition of a small quantity of water, and when slaked cover freely with water and stir. Pour the milk of lime thus made into the copper sulfate, straining it through a brass wire strainer of about 30 meshes to the inch. Pour more water over the remaining lime, stir and pour into the other; repeat this operation until all the lime but stone lumps or sand is taken up in the milk of lime. Now add water to make 50 gallons in the tank. After thorough agitation the mixture is ready to apply. The mixture must be made fresh before using, and any left over for a time, should be thrown out or fresh lime added. Water, to make 50 gallons.

solution according to the strength desired, are taken for each 50 gallons of mixture to be made. For extensive spraying, a long trough or box of uniform width may be used in which to slake and keep the lime. The quick lime is weighed out according to the amount needed immediately, placed in the trough and slaked with a small quantity of water. The whole is evenly spread and covered as a putty, with water to exclude the air. This putty may be removed in calculated portions, placed in a tub and treated like the freshly slaked lime. By means of stock solution of copper sulfate and the lime in putty state, much valuable time is saved in filling the barrels or tanks used in spraying.

Ammoniacal Solution of Copper Carbonate Copper carbonate, 6 ounces. Ammonia, about 3 pints. Water, 50 gallons.

Dissolve the copper carbonate in the ammonia and add the water.

Copper sulfate, 4 pounds. Water, to make 50 gallons. Dissolve the sulfate as directed for Bo deaux I. Caution: This solution will injure folia It can be used only before the buds open.

Potassium Sulfid Solution Potassium sulfid (liver of sulfur) 1 ounce. Water, 3 to 4 gailons. This solution will not remain unchanged The potassium sulfid must be kept in a wel

5.

INSECTICIDES.

Kerosene Emulsion. Kerosene Emulsion.

Dissolve one-half pound hard soap in one gallon of water, (preferably soft water) and while still boiling hot, remove from fire and add two gallons of kerosene. Stir the mixture violently by driving it through a force pump back into the vessel, until it becomes a creamy mass that will not separate. This requires usually from five to ten minutes. The emulsion is then ready to be diluted with water and applied. For the common scale insects and hard bodied insects like the chinch bug, use 1 part emulsion to 8 or 10 parts water. For soft bodied insects (plant lice, etc.), use 1 part emulsion to 15 to 20 parts water.

Kerosene emulsion kills by contact and therefore the application should be very thorough. It may be used against a great many different pests, but is especially valuable for destroying those with sucking mouth-parts, for they cannot be killed with arsenical poison. parts water.

In combination with Bordeaux mixture Paris green may be used at the rate of 1 pound to 175 to 200 gallons.

When Bordeaux mixture is unnecessary, the Paris green may be used at the same rate, but 2 or 3 pounds of freshly slaked lime must be added to prevent burning of the foliage. Keep the mixture well stirred so that the poison will be distributed evenly. In cases where successive sprayings are In cases where successive sprayings necessary, it is important to consider accumulation of poison and use a sligh weaker mixture unless sufficient rain fallen to wash off the poison thoroughly.

London Purple. If desirable London purple may be substituted for Paris green, but it has the disadvantage of being somewhat variable in composition and contains more soluble acid. For that reason it must be used somewhat weaker, or else an abundance of lime provided, so as to prevent burning of the foliage. It has the advantage of not settling as readily as

Paris green. White Hellebore. Hellebore is often employed in cases where reenical poisons would be objectionable. Iso one ounce to three gallons of water.

Pyrethrum.

Pyrethrum is usually applied with a belows but may be used as a spray at the rate of one ounce to two gallons of water. Whale Oll Soap Solution.

Use from one to two pounds of the soap one gallon of water. Be sure that the so is thoroughly dissolved, and then apply form of spray.

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Large Users ge and New York C





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over, contains 124-pages, Manures and Fertilizers Fruit Culture, Western

ower, Rochester, N. Y.

and Fungicides may from time of plant-

REMARKS AND CAUTIONS.

White skinned apples

are injured by spraying after 3d. Don't use emulsion in full leaf.

Use 3 when fruit is large.
Difficult to reach aphis.
Air slaked lime may Avoid strong solutions

· Bord. coats fault if used for 3d.

Follow by 2 or 3 sprayings with am. cop. carb. Don't spray after fruit is half grown. Second even probably

Cover fruit well. se only one-hi

One and one-half to two lbs. soap dis-solved in one gallon water. Jar and gather stung

Second should come after blossoms drop. Keep spray from leaves on bearing canes.

ris Green.
with Bordeaux mixture
be used at the rate of 1
0 gallons.
mixture is unnecessary,
hay be used at the same
inds of freshly slaked lime
prevent burning of the
mixture well stirred so
1 be distributed evenly.
successive sprayings are
mportant to consider the
oison and use a slightly
inless sufficient rain has
the poison thoroughly.

don Purple. ion purple may be substi-een, but it has the disadomewhat variable in com-ins more soluble acid. For the used somewhat weak-dance of lime provided, so ling of the foliage. It has not settling as readily as

e Hellebore.

n employed in cases where would be objectionable. three gallons of water. 10.

rethrum. ually applied with a bel-sed as a spray at the rate to gallons of water.

Soap Solution. two pounds of the soap to er. Be sure that the soap solved, and then apply in Money in Plums.

Written for Green's Fruit Grower by

next season after it was set out. It was a Geuli, but it nearly killed the tree. An-75 bushels of plums from the 75 trees and

center of the village of Bellows Falls, which gives us an excellent local market. Of course there being no buildings on the place at the time of my purchase, we were obliged to build all new, so we now have a very comfortable and commodious set of buildings which command a fine view of the beautiful and far famed Connecticut valley for many miles up and down the river.

a thriving fruit farm.

Berry Crates and Bas-kets a Specialty. out, and the land plowed.

All this would be a light job to the man with plenty of capital, thus enabling him te hire the work done. But with me it was quite a different matter, for while owning our place clear we were still obliged to work out our living from these six acres of new land. This we proposed to do by planting the place to fruits, and raising poultry. I will state here that our family, when we came here seven years ago consisted of three boys aged respectively 19, 11 and 10 years, Mrs. H. and myself. The oldest son, who is now married, has not lived at home for some three years. I have been thus particular in making the above statement to show just what our working force has been, for aside from a few days' work during the busiest season, all the work has been done by ourselves. The large trees were cut on conract, and some ditching was done in the same way. I have my place fenced with a 58-inch 12-bar Page fence, and consider t the very best fence I ever saw.

Baskets, We commenced setting fruit trees the first spring after buying the land, and We now have growing and most of them have been fruiting from one to six years, about 25 apples, 50 pears, 200 plums, 250 cherries, 50 or 60 grapes, a few peaches and quinces, 250 currants and thousands of raspberries, blackberries, strawberries, etc. And already have an order made out for Green's Nursery for 300 more plums

and a few more apples.

A large number of my plum trees are of the Japan varieties, such as Abundance, Burbank and a few each of Wickson, Red June, Hale. Chabot and Satsuma (the latorder will call for Lombards, Burbank. Red June, Wickson, Abundance and an orchard of 500 plum trees which of course is not a large one as compared with some of the large commercial orchards of the country, but if rightly cared for should give quite a lot of plums after three or

four years. I have great faith in the varieties of Japans named in this list, and would not hesitate to plant large orchards of them. also have great expectations for the newer varieties of Mr. Burbank's creations, samples of which he sent me last season. Climax is especially fine, also America, Chalco and Apple. I also have

Of the older varieties of plums Lombard stands at the head of the list here. We already have quite a large per cent. of this variety and shall plant 100 more this spring. When we first commenced planting trees on this place we put red raspberries in between the rows of trees on a part of the lot, but I would not do it again, or advise any one else to do so. of a specialty as to certain flowers, and Trees planted the next spring with no raspberries among them are certainly twice as large, and have given me ten times more fruit than those where there

were berry bushes. as we could, and have manured the land well, yet the bushes seem to get the best of it. We will root out the raspberries after this season and give the land up to the tree and hens. I believe it is better to get one good crop of fruit from the land than two poor ones, although we should not complain much for we have got each | good. year a fine crop of berries that have

brought good prices. Of course in the past seven years we have done a good deal of hard work, but at the same time we have derived a great amount of pleasure from our work. got our boys out of the village where they Rochester, N. Y. have grown from puny, spindle-legged

> Tacked or Wire Stapled Berry Baskets, Peach Baskets. Splint or Climax Grape Baskets, Berry Crates. We are offering our 32 Quart Crato filled with Baskets at 25 cts. each.



Write for Catalogue and Price List.

their home for anything the village could offer them. They are acquainted with the land, the woods, the flowers, the birds and the insects for miles around us. They

pale-faced boys to stout, broad-shouldered,

rugged fellows who would not exchange

SATISFACTION.

land, but who send out agents and then

Another thing that is giving us great

satisfaction is our fence. We wanted a

fence about the orchard that would be

hen-tight, turn stray stock of any kind,

and remind stray boys that "thus far shalt

thou go and no farther." The fence is a

58-inch, 12-bar Page, put up in the best

possible manner, with posts and gates

painted. I believe it makes the best fence

on earth. We do not feel that we shall

for many years to come. A wire fence is

so much neater than a wooden one, they

leave no place for weeds and briers to get

foothold along beside them, and besides

All these improvements have been made

as fast as we could see our way clear to

make them, and in a thorough, substantial

manner for we expect to spend the rest of

our days here; and hope that at least some

of our children will spend theirs here also.

on a farm we are obliged to go about

ragged and dirty, or have the yards filled

up with old wagons, carts, plows, harrows

and all the odds and ends that can be

scraped up about the place, or bought at

abundance of shrubs and flowers, all of

which we intend shall be kept as well as if

we lived on the most fashionable street in

the city. We do not make these statements

in a boastful way, but there are so many

people who seem to think that because they

live in the country it matters little how

they themselves look, or how much rub-

bish is laying about their place. I believe

this is one of the greatest mistakes we can

make and one that is really an indirect

cause of many abandoned farms. Why

should not every farmer make his home

surorundings as attractive and pleasant as

Would it not have a tendency to keep

the boys on the farm ?-A. A. Halladay,

Bees on Fruit Farms.

his brother's city or village home?

Mapledell Fruit Farm, Vt.

We do not believe that because we live

they are cheaper than a board fence.

buy the stock to fill their orders.

A. A. HALLADAY. While living in the village I planted some take an interest in the place because they seventy-five plum trees on a portion of have a portion of the income for their own. my lot, built a fence around them and kept Another source of great satisfaction to hens among the trees. Most of the trees us is our orchard of fruits, the trees were were Lombards, and by close pruning and first-class in every respect so far as one thinning of the fruit I got very good recould judge when they came, but when sults. Many of the trees commenced to they came into bearing they proved to be bear the second season after planting. I true to name and as fine in fruit as in tree. remember one tree in particular that gave me a half bushel of beautiful plums the I can assure you that this fact gives us no small amount of satisfaction, especially other tree (a Lombard) produced four when I look about at some other orchards bushels of plums. At four yours old I got the trees for which were bought of tree \$4.00 a bushel for my plums, so it will be agents. I have in mind one place where seen that there was money in plums. The delivered a few trees last spring. The ast season I lived on the place I got about lady called my attention to quite a good sized orchard and remarked that only one several of the trees were not old enough tree in the lot (and that a crab apple) was to bear. The next season it was estimated what they bought them for. They were that there was 100 bushels, and now after worthless varieties, all of them. She resix years the orchard, owing to neglect of marked that no one could ever deliver to its present owner, is well covered with her any nursery stock that came from black knot and worthless. This orchard if properly cared for would have given an Rochester, N. Y. I informed her that the annual income of at least ten per cent. on

stock I had brought her came from that very place. That it came from Green's the money paid me for the piace, and three days' work each year (aside from picking) Nursery Co., where all my own trees came from, but that she need not have it if she would have been all the time required to did not want it (her son had ordered it have kept the trees in first-class shape. and knew where it was coming from). When I purchased my present place, She asked me if it came from the same Mapledell Farm, comprising about six place as the trees that were growing at acres of land, it was almost a wilderness, my place, and when assured that they a small portion of the land had been culdid, she accepted them at once with the remark that "My son says your trees are tivated, but the most of it was pasture and woodland. This land lays on a terthe finest he ever saw." I mention these race overlooking the Connecticut River on facts to show how disappointing it is to the east and backed up by a mountain on buy trees, plant and care for them for the west. It is situated one mile from the years only to find we have been swindled out of our money and years of time by some dishonest tree agent or nurseryman, or I might better say some dishonest tree dealer, for most of this swindling is done by men who do not own a foot of

in clearing up new land and building a new home, can have but little idea of the time, hard work and money that is required to bring a howling wilderness into

The large sugar maples, pines and other trees were first converted into fire wood or lumber, old board and brush fences re moved, brush burned and stones cleared up and then the stumps dug and blasted

Fruit growers are becoming familiar with the value of honey bees as pollen distributers, and authorities advocate the encouragement of bee culture in the vicinity of fruit farms. Regarding experiments ter is worthless here) and my this spring's which have been made in the raising of fruit where many bees were in reach of the same and also where there were no Chabot (Yellow Japan). This will give me bees in the vicinity, A. H. Duff says, in the Kansas Farmer, that in almost every case where the bees were in ready reach of the orchards the fruit was not only more in quantity, but also better in qual-This is not only so with fruit, but with nearly all seed bearing plants, both wild and domesticated, according to Mr.

Duff, who says: One would be somewhat surprised to see the different well known cereals enumerated that bees work on and carry pollen from. There is not one of the well known cereals that furnishes pollen that they do not work on and distribute the pollen. Giant Prune top grafted, which produced They work extensively on the bloom of beautiful fruit the second year from the corn, wheat and oats and all the different sorghums and all the different clovers. It s true that they do not work extensively

We ran the cultivator in them as long

Bees and Fruit.

Careful experiments quoted in Bulletin No. 26, issued by the Department of Agriculture, gave the following showing: Forty apple blossoms, protected gave no fruit and the same number of blossoms exposed to bee work gave 15 fruits; 140 pear blos soms, protected, gave no fruit, and the same number exposed gave 7 fruits; 300 cherry blossoms, protected, gave 9 fruits, and the same number exposed gave 119 fruits; 60 strawberry blossoms, protected, gave 9 fruits, and the same number exposed, gave 27 fruits; 184 raspberry blossoms, protected, gave 93 fruits, and the same number exposed gave 160 fruits; 10 heads of clover blossoms (red), protected, gave no seed, and the same number exposed, gave 191 seeds; 10 heads of clover blossoms (white), protected, gave no seed and the same number exposed, gave 541

This is, indeed, a very favorable showing for the honey bee, at least as claimed by our bee-keepers. But we should not forget again that there may be ten other insects, especially bumblebees and various beetles, to every bee which have brought about that result. In the case of the redclover blossoms, for instance, we know that the honey bee could not have been the agent which secured the pollination. -T. Greiner, in Farm and Fireside.

Japan Plums in Colorado.

Editor Green's Fruit Grower:

I have many varieties of Japan plums growing and have found several that are of no use here owing to lack of hardiness, both of tree and bud. Red June is all right and should be extensively planted, also Willard and Ogon. These are perfectly hardy and will please all who give them a trial. Burbank is also quite promising. Hale and Wickson no earthly use in Colorado: trees won't stand even zero weather. Satsuma badly killed this year, though they bore some fine fruit last year. I shall plant largely of Red June and Ogon .-Yours truly, E. Ford Jewett.

(The above report of Japan plums Colorado will be interesting to people living n the far West where the winters are far more severe, and the changes of temperature more sudden than in the Eastern and Middle States. At Rochester, N. Y., and wherever the thermometer does not go below 10 or 12 degrees below zero, we have found all of the Japan plums named be troubled with the fence question again by Mr. Jewett perfectly hardy. We consider the Japan plums as a class, and such varieties in particular as Hale, Wickson. Burbank, Abundance and Red June very valuable varieties, and worthy of extensive trial.-Editor Green's Fruit Grower).

Horticulture as a Hobby.

Written for Green's Fruit Grower. By L. B. PIERCE.

Most every one has some kind of hobby or side issue independent of occupation, which furnishes an outlet for surplus energy, or as a means of recreation, or mental unbending. Along horticultural auction. We have a nice large lawn with an lines flower planting either in the garden or in pots has always been a sort of hobby with women, and fruit planting and vegetable growing with men. It is a harmless amusement even if there was no resulting benefits, but when the results are taken into account I wonder that more do not occupy their leisure time in planting and cultivating a bit of ground. This is especially true of amateur fruit growing. A grape vine costing from 10 cents to a dollar needs scarcely any ground room provided the vine can clamber up a building or trellis into the light and sunshine and in time be made to produce from twenty to forty pounds of luscious fruit. A vine well trellised or trained to the side of a building should not take more than six hours a year of actual work including the gathering of fruit, and this work would be rather in the form of pleasant recreation than otherwise.

I have a friend and neighbor, a cripple oldier, who has to get about in a wheel chair. He has a great passion for garden ing, but he found little pleasure in doing it by proxy. After many experiments he finally settled down to planting and attending a small vineyard of perhaps

twenty vines. I think he has tried and discarded more than thirty varieties, and keeps less than a dozen as a result of his experiments. He has a good deal of time to watch his pets and with the vines upon low trellises he is able to watch and direct their growth, and by pinching back the growth of the shoots frequently, he keeps them dwarfed while he gets magnificent bunches of fruit, Moore's Diamond is a favorite, as is also Jefferson, although this is a little late for his location. Campbell's Early promises finely. He has really brought the production of grapes to a very high perfection. and in doing so has not only pleasantly filled up many a tedious hour, but become an authority on grape growing in the community, and by means of his connection with the county horticultural society benefited a great many by his self-acquired knowledge. This is a striking illustration of the adage, "Where there is a will, there

is a way." I was greatly interested lately in reading woman's account of how she prepared in late autumn for a March moving. I judged she lived upon a rented farm, as she was careful to talk only of plants, of which there was great abundance. One thing was a variety of red raspberries, taking some of the numerous sprouts. She heeled them in in boxes of moist soil and then covered the boxes in some way so they would not be frozen up when moving time came in March. In this way she lost no time, but was able to start at once with some things which she knew were good. She had the true spirit of the advanced horticulturist and as she gets farther along in her new home I presume numerous orders will in time find their way to nurserymen and florists for additions to her collection.

There is a large amount of pleasure in watching the behavior of new and untried fruits and one can indulge a hobby along this line without a very great outlay of money, and if one gets only ordinary results the fruit is generally as good as older sorts, so one is out only the increased cost of the novelty. I know a talented and busy lawyer who owns a place on an electric railway outside of a large city, and on this place he has been for twenty years testing new tree fruits, mainly plums and cherries. trees of a kind generally answer and his whole bill I think does not exceed six dollars a year for new sorts. Since he has become known as a careful and conscientious experimenter, originators, with faith in their novelties, send him specimens and trees gratis. He has unquestionably the finest collection of native and hybrid plums in his State, and one year when tender sorts were generally killed, he had more than forty bushels to sell, thus getting back in one season more than he had invested in the little orchard. This orchard Asthma. They only ask in return that is being watched with interest by others when cured yourself you will tell your neighbors about it. This is very fair, and you should surely try it, as it costs you ropean kinds do not succeed. Reader, if you have a bit of spare ground and a few

moments daily during the growing season to spare, plant something to watch and study; it will broaden your horizon and lead you into new lines of thought, even if it is only a current or gooseberry bush.

The Farmer's Front Yard.

You will excuse me if I say it takes a elescope we used when we viewed the last comet, to see where it ought to be and what it contains, A wood pile, old boxes and barrels, tin cans, old shoes, rubber boots, straw hats, check shirts, overalls, bones, stones and brick, burdock and thistles. Then if there happens to be one of those lovely elms in the front yard, the farmer immediately concludes that nature has made him a shed, and under its drooping branches we find his self-binder, mowing machine, hay rake, drags, harrows, rollers, sulkey, plow, a wagon or two, bob sleds, stone boats, and the remains of a top carriage his father used to ride in. Here is one of the causes that puts the mortgage on the farm-expensive machinery bought and not properly housed.

Then, on closer inspection, we see a very little grass, and also find the footprints of the horse, cows, sheep, a pig or two, chickens, ducks and geese, and last but not the least, the dog. If the farmer is not very poor he usually has one dog, but if he is poverty-stricken, he has three or four, who lay their lazy selves on the grass, until the grass turns over in disgust and forces its way on and on until it gets to China, for sometimes these are the farmer's lawn mowers.

Now there is another kind of front yard, and this one is a puzzle to me. The house and all the buildings betoken thing is perfectly clean, but such a barren, desolate front yard. One or two old evergreens stand like dreary sentinels, and that is all. I've wondered so often if the people who reside there thought it pretty, and if the children could in after years think of it as Home, sweet Home. Re form is needed here, but there is no law

to compel people to beautify their front yards. But it seems to me I hear some one say, why I can tell you what's the matter with it, it takes one real smart man nearly all the time to tend a yard and keep it in good condition. I know from experience that this is so, but did you ever try the co-operative plan. Then, of course, it wouldn't be the farmer's front yard, but would have to be newly christened and be called our front yard; that name would include the farmer, his wife, and all the children, but this one is so interesting to me I hardly know where to begin and perhaps will not know enough to stop.

The house stands quite a distance from the road to escape the dust. A nice path eads up to the door and the grass is cut with a lawnmower. Evergreens, shrubs, vines, roses and flowers, mignonette, sweet peas, pansies, lilies, geraniums, verbena and dozens of others too numerous to men-tion adorn the yard. I know the husband has helped the wife to beautify this front yard, the children pull the weeds and cut the grass, but I think last spring was the most discouraging of any for a number of years. The rain came down in torrents every other day, it seemed to me, for months. Some of our pet flowers drowned out, and our bulbs, some of them danced a merry jig until they were out of sight, while others planted deeper, rotted in the ground, and it seemed an impossible thing to keep the grass cut. We never worked harder in our lives for something we never got, and it quite surprised me when we had the horticultural in October to hear one lady say, "we came to the back door, we were anxious to see if you kept your back yard as nicely as you do your front vard.

Now, I suppose some will wonder if would advise farmers (when their standard money crop, wheat, is so low in price), to hire a landscape gardener, and buy shrubs at from one to three dollars a piece. Now this is not necessary. What we plant with our hands gives us greater pleasure. Now I hope you will all remember that we all have a real front yard and we also have an ideal one, and sometimes the ideal is much handsomer than the real .- Mrs. F. A. Graham, in The Miami Valley Horticulturist.

A Lady Tells How She Supports

Herself and Family. "I often read of ladles who work hard trying to earn enough to keep body and soul together and for their benefit I will relate how easily one can get along in the world if they only know how. There is a big firm in Pittsburg that manufactures flavoring powders. I had tried them myself and knew they were splendld, so sent for samples and tried selling them. I found it so pleasant and easy that I have kept right at it and never make less than \$3 a day and often clear more than \$5. The powders go twice as far as the liquid extracts sold in stores and are much stronger. I sell from one to and are much stronger. I sell from one to ight different flavors in each house. eight different flavors in each house. They are used for ice cream, custards, cakes, candies, etc., and are so delicate and give such a rich flavor that everywhere I go I gain a permanent customer. Those of your readers who would like to make money can get full particulars by writing to W. H. Baird & Co., 118 Telephone Bldg., Pittsburg, Pa., and they will give you a good start. I support myself and family nicely and we have a good many comforts we never had before." "L."

Removal Notice.

The firm of A. H. Montague & Son, 120 Warren St., New York City, owing to the increased volume of their business, have been obliged to move into larger quarters at 109-111 Warren St. This firm has bee established upwards of 21 years. Their reputation for fair dealing and honest goods is well merited. They control the output of several large factories, and are very large dealers in fruit packages and veneer goods.

Twenty-Five Dollar Cash Prize for the Name of a New Strawberry.

This offer has not received as much attention as we had supposed, and it looks as though some one would get twenty-five dollars who has not sent in a very ac ceptable name for this new and valuable strawberry, now known as "Green's Big Berry.

We, therefore, call your attention to ou offer, which is made on condition that whoever submits a name, and expects to get the prize, shall order at least a few of these plants at the same time. We are willing to pay the twenty-five dollars, but we are far from satisfied with the name that have been sent in so far, although

some are much better than others. We have felt confident that some one would suggest a name better than any we could think of ourselves.

Please give this your attention. Green's Big Berry is the largest berry we have ever seen and is desirable in every way. GREEN'S NURSERY CO.. Rochester, N. Y. Apple Tree Wood is Valuable. | T

apple tree, even though it be long unproductive. So long as it is sound in the trunk it may be made to produce profitable crops. But there are many old trees too far gone to be worth saving, and thousands such are cut up and burned for firewood every winter. Apple tree wood much smarter woman than I am to find is worth too much to be put to such uses, it sometimes. We have no need of the though apple wood makes a hot fire and an ash rich in potash. It is a very tough wood, and even when full of knots its value for manufacturing purposes is rather enhanced than lessened. The factories will drive as hard a bargain with the farmer as they can, but sound apple wood cut in suitable shapes is worth many times its value as firewood, and the farmers who have such wood should know the fact .-American Cultivator.

Hardships.

Young man or woman, do not shrink overmuch from hard rubs and heavy burdens. Character comes by these things. Addressing a wealthy Boston audience lately, the venerable Edward Everett Hale said, "We must not make things too easy for our boys and girls." He related that when he was a young men he attended a university commencement in orabout to enter the arena of life. Ralph Waldo Emerson was in the audience. After the oration was delivered Mr. Hale introduced himself to Mr. To introduced himself to Mr. Emerson, and spoke a few words in commendation of the

orator. "Yes," said Emerson, thoughtfully: "he js a better fellow than I thought he was. Now, if something will only happen to develop character in him. If only his father wealth. The farm is well cared for, and | will fail in business and become unable to when you enter the house you will find it help him, or some other calamity come to commodious and well furnished, every- be to him a blessing, what a man he may make!

> How to Treat Winter Killed Trees.

The recent cold weather has very seriously injured the fruit trees, especially is this so in the Central States. Many of the peach trees are killed back to the snow-line, and some to the ground. Some other kinds are badly hurt.

In many cases the branches are killed back more or less, but the bodies are all sound. The injury may not be apparent on the outside, but to cut beneath the bark will show it plainly. The normal color is replaced by light or dark brown on the surface of the wood. This is not a sure sign that death will follow or, has aiready taken place, but it is certain that there is injury, and that the growth, if any, will be feeble; at least, until new, healthy wood and bark is formed.

When I lived in Kansas we had two experiences of this kind, one of them be ing very severe. The result was that many of the trees outgrew the injury and a brown ring was left in the wood to mark the year in which the damage occurred This was seen in apple, pear, cherry peach, and many other kinds of fruit

Just what to do now is a matter that requires considerable sound judgment. Where the trees are dead to the ground there is no other way than to dig them out. Some that are killed or badly injured nearly to the collar may be able to throw up sprouts and eventually make fairly good trees. This is one of the most doubtful parts of the whole matter. The smaller the trees the more likely are they to thus recover, under proper treatment. Those with sound bodies and main branches should be cut back that far. The peach trees are probably most in need of cutting back, and it is certain that all of them that are injured in their tops will be greatly benefited by severe cutting. They will put out sprouts and make quite good trees and with lower heads than before, if the branches are cut to mere stubs. The same is true of the plum and cherry although the latter is very sensitive

to having its branches cut. A close watch should be kept during the early part of the coming growing season, and wherever there are not signs of vigor-cus sprouts coming out close to the ends of the stumps, cut back farther or dig out entirely.-H. E. Van Deman, in American Gardening.

The Hard Winter in Iowa.

Editor Green's Fruit Grower: Believing that a report as to fruit pros pects from South Central Iowa would be of interest I will say that after the coldest February (without any snow on the ground) a week below zero going as low as 30 degrees at times has been very destructive on all Japan plums. There is not a live flower or branch bud on Abundance. Burbank, Red June, Orient and Wickson, The only live flower buds I have are the De Soto and perhaps the Wyant, Peaches and pears all dead. Cherries: Early Richmond, Dyehouse, Montmorency buds all dead. The Wragg all right yet. Concord and Moore's Early grape in good shape now. Worden and Moore's Diamond doubtful. Raspberries badly injured. Blackberries also. Strawberries, where nulched early are seemingly in fair shape. Downing and Red Jacket gooseberry green. Some outer twigs of five-year set Jonathan apples are colored as are some others in my experience of 20 years. I have never seen fruit of what we would call hardy kinds winter kill before and from all reports it is the most general disastrous in my recollection of thirty-five years .- A. J. Masters.

Loudon Red Raspberry.

As Spoken of at the late Western New York Horticultural Meeting.

Chairman Willard likes the Loudon red raspberry; he thinks it a finer berry than Cuthbert; William Smith, a veteran nurseryman of Geneva, indorses Mr. Willard's commendation, Mr. Reed, of Wisconsin, finds Loudon hardy, enduring 25 degrees below zero. He thinks it the grandest red raspberry he has seen. Mr. Hubbard said Loudon is the finest at the Geneva Experiment Station.

Three Hundred Varieties Mixed Flower Seeds by Mail, Post-Paid for 15 Cents.

Or, we will send the above flower seeds free by mail to all who send us 35.cents for Green's Fruit Grower, nine months, to

January 1, 1900. Or we will mail these flower seeds free by mail to all who send us 25 cents for any one of Green's Books, the books also to be sent by mail, post-paid. These books are as follows: First, Green's American Fruit Growing; second, Green's American Poultry Keeping; third, Green's Six Books on Fruit Culture, under one cover; fourth, Green's Four Books on Fruit Cul ture, under one cover.

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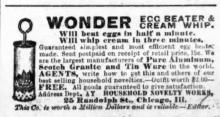
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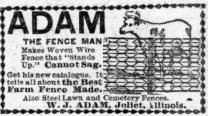




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Do You Suffer From Asthma?

on the common red clover, but to some de

gree they do, and on all other vegetable

blossoms. I do not now think of one they

Some other insects, of course, are pollen

distributers, but not nearly as general as

the honeybees. These insects have more

you will scarcely see them on more than

one variety of blossoms, so that the honey-

bee is the only general distributer of pol-

len, and her field is so much larger. The

honeybees take in a wonderfully wide ter-

ritory. They will do a thorough work

The honeybee is the fruit grower's best

friend and one of nature's great gifts to

men. The honey which bees gather is all

clear gain, and while they are gathering

it they are in addition carrying pollen

from flower to flower, thus doubly doing

over a territory six miles in diameter.

do not work on in the vegetable line

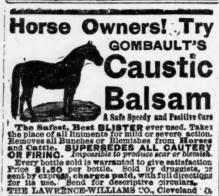
If you do, you will be interested in knowing that the Kola Plant, a new botanic discovery found on the Congo River, West Africa is pronounced an assured cure for the disease. Most marvelous cures are wrought by this new plant, when all other remedies fail. Rev. G. Ellsworth Stump, Pastor of the Congregational Church, Newell, Iowa, writes that the Kola Plant cured him of severe Asthma of twenty years' standing; Alfred C. Lewis, Editor of the Farmer's Magazine, of Washington, D. C., testifies that it cured him when he could not lie down at night without fear of choking, and many others give similar testimony. It is really a most wonderful discovery. To prove to you beyond doubt its wonderful curative power, The Kola Importing Company, No. 1164 Broadway, New York, will send a large case of the Kola Compound free by mail to every reader of the GREEN'S FRUIT GROWER who suffers from any form of

A Warning to Hunters.

Forest and Stream is responsible for the statement that twelve hunters were mis taken for deer and killed by other hunters in Wisconsin the past season, and com-menting on this fact says that "if this reckless shooting continues, no prudent man wili venture into the woods, and whenever a father of a family declares his intention of deer hunting in Wisconsin it will be in order to appoint a commission de lunatico inquirendo.

'To inveigh against this form of man slaughter may be futile; to mitigate the exceeding and unspeakable outrages of these repeated killings is beyond human power; and all the talking and writing in the world will not stay the hand of the fatuous imbecile who is predestined to slay his brother man by mistake for a deer. But on the other hand, it is certain that silence can avail nothing, and the talking and writing may do some good. Let every father, then, exhort his son, and every son his father, the brother the brother, and every man every other man, and in particular each one himself, never to shoot until he knows-not thinks he knows, but knows-what he is shooting

Even if this advice is followed, hunters are never safe from being shot or from shooting other hunters. An absolutely sure way is to shoot not at all. Live and



ANY child can bud a tree or rose bush if they will use the **Rapid Fruit Tree Budder**. Send twenty-five cents to **J. D. ABELL**, Tallapoosa, Ga., for a box of Budding Clasps with full directions Please mention Green's Fruit Grower.

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FOR SALE, Pure Bred Barred Plymouth Rock Cockerels \$1.50 each. Eggs in season. Address, CHAS. L. HYDORN, Morristown, New York.

GOLD Coin Seed Corn. One dollar per bu. hybridized variety; best I ever raised, sample for stamp; sample ear, ten cents. A. L. CARY, Lewis, O. W HITE WYAND. Eggs from choice mat

V ings, \$3.00 setting; two settings \$5.00 J. F. Randall, 25 Spring Hill Ave., Bridge water, Mass. M.A.M. W YANDOTTES, Golden and Silver Laced. Rose Comb, Brown Leghorn, \$1 per

Rose Comb, Brown Leghorn, \$1 per setting. Catalogue free. Wm. Carson & Sons, Rutland, O. M. A. M. FOR SALE—15-acre Farm, Berries, Grapes, Currants, Tree Fruits, house, barn, outbuildings. Home market, Address Chas. Van Demark, Petoskey, Mich. M.A.M.

W HITE WYANDOTTE, Barred Plymouth Rock, Rose Comb Brown Leghorns. Eggs \$1.00 per 15. Cockerels and Belglan Hares \$1.00 each. E. B. Ketcham, South Haven, Mich.

EGGS for Hatching, 6 cts. each, from my yards of high class S. C. B. Leghorns, B. P. Rocks and S. S. Hamburgs. A. L. Cary, Lewis, O. M.A.M.

FOR SALE CHEAP.—A good 80-acre farm near county seat, Oceana Co., Michigan. For particulars, address, P. O. Box 424, Hart, Mich.

M cVICKER YARDS, Giffords, Great Kills, N. Y.—Barred Plymouth Rocks, White Wyandottes, Pekin Ducks, Eggs, 15—\$1.00; 90—\$5.00. Bred for "meat and eggs."—A.M.J. P. C. can learn of a remedy for chronic dysentery from Allison Alderman, Wilmington, N. C., who was cured after three years of suffering. Stamp for reply. A.M.J.

BARRED PLYMOUTH ROCKS-Bred only from first-class stock. Hawkins-Thompson strain. Eggs, \$1 per 15. Gaylord Hall, Little Valley, N. Y.

C. A. BARTLETT, Worcester, Mass. The dried meat and bone preparations, and long a favorite. Send \$1 for a sample 50-pound bag. Free catalogue of beef scraps, bone, shells, grit, etc.

15 EGGS, \$1; all varieties of Leghorns, Plymouth Rocks, Minorcas, White Wyandottes, Light Brahmas, Golden Pollsh, Blue Andalusians, Bantams, Golden and Silver Seabright; White Pollsh, Red Pyle, Black Rose Combs, Buff Cochins, Pekin Ducks, \$1-11. B. L. Osborne, Greene, N. Y., Box B. & G.

WHITE CRESTED BLACK POLISH. Very handsome, good layers. Eggs \$1.25 per 13. Cockerels \$1.00. H. Lauch, Middle Lancaster, Butler Co., Pa.

POR SALE—Splendid sixty-acre farm, four miles east St. Joseph, Missouri. New eight-room house, good batus and out-buildings. One thousand young fruit trees, also small fruit. Improvements complete. Price reasonable. Terms easy. E. J. Wilkerson, Prospect Lodge, St. Joseph, Missouri.

SMALL FARMS ON THE JAMES RIVER— In sight of Newport News and the Hampton Roads. Twenty-five, fifty and one hundred acres. Most beautifully situated on the south side of the river. Address J. A. Morgart, Smithfield, Va.

WHITE HOLLAND TURKEY EGGS from thoroughbred stock, \$2.00 per setting. Order sood. Mrs. Edith Williams, Bushnell,

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and claims this book when GREEN'S FRUIT GROWER, Rochester, subscribing. Address, GREEN'S FRUIT GROWER, N. Y.

Simple Facts About Spraying.

The general who would marshal his roops and charge an enemy without knowing the whereabouts of that enemy or its nationality or even the nature of but an excess does no harm, so long as it his own guns and ammunition, might render creditable service in a Spanish army, is not thick enough to clog the nozzle. For but not in an American one. Yet men have entered the orchard to spray with no solve very quickly in water, so that if much is to be used time may be gained by better knowledge of conditions than this. They knew that to spray was a good thing, but had they used cold water it would have been cheaper and oftentimes hanging it in a barrel of water so that it remains near the ton; it will then all disjust as effective. solve and settle to the bottom, when if

There are three distinct classes of enemies which come within the range of the spray pump. These are insects, fungi and bacteria. Most of us know what insects are; their tribes are legion, but so far as spraying is concerned we may divide them all into two simple classes: Those which get their food by biting and those which get it by sucking.

The biting insects eat as we do, i. e. they bite off and chew their food. If, then, we put some poison on this food, we can destroy them. For this purpose arsenic in some form is used more than all others. The two most common forms are Paris green and London purple, each of which contains, if a good article, 45 or 50 per cent, of arsenic; in Paris green it is combined with copper; in London Purple it is combined with lime. Paris green is a regular manufactured product, London purple is a by-product which is left in the manufacture of aniline dyes. Paris green, when pure, will dissolve in common ammonia, giving a clear, blue color; this makes a simple test to determine its quality, for things most likely to be used as an adulterant will not dissolve in that way. London purple cannot be tested in such a simple way. Since these are used for the arsenic

coating on the leaves and fruit, so that which they contain, why not use white when spraying is needed after the product arsenic itself? Two objections have arisen: First, accidents are more liable approaches maturity it may be necessary to occur, because, if carelessly handled, to substitute some clear liquid; for this purpose ammoniacal carbonate of copper it might be mistaken for soda or corn is oftenest used. This is made by disstarch, or children might mistake it for solving three ounces of copper carbonate sugar; second, when used alone it is likely in one quart of ammonia and diluting to to injure the foliage. Arsenic, when solutwenty-two gallons of water. Bordeaux ble, burns the leaves, and more of it is soluble in this form than in London purmixture is used more than all other fungiple or Paris green. This injury seems to cides combined, vet in special cases some thing else may be preferable. For goosehe due to its acid quality, and can be counteracted by the addition of an alkali, berry mildew potassium sulfide, in the proportion of one-half ounce to a gallon of like lime or soda. A formula used and ecommended by the Ohio experiment stawater, is preferred. tion consists of two pounds of white ar-It should be again emphasized that, as senic, four pounds of washing soda, two gallons of water; one and one-half pints of fungi, fungicides are of no value in fighting insects. This, like all other good rules, this mixture are used to a barrelful of Bordeaux mixture. A formula recomhas a few exceptions, but with the intelmended by T. G. Yeomans at a recent ligent man the exceptions will take care of themselves. One or two of them might meeting of the Western New York Horticultural Society consists of one pound of be here mentioned, as, for instance, in white arsenic, ten pounds of lime, and 400 fighting the codling moth, where Bordeaux gallons of water. Mr. Yeomans says this mixture is useful because it assists the is superior to Paris Green, less expensive, Paris green to stick. Bordeaux mixture and remains in suspension longer. has also been found useful in fighting the

The sucking insects get their food by means of a beak which they thrust into the plant, and thereby draw out its juices. Against these insects Paris green and London purple are utterly useless, simply because they do not get it. The man who sprays for plant lice with Paris green is therefore wasting his time and ammunition. These insects must be killed by something that will destroy them by coming in contact with their bodies, or by some poisonous gas which they can be made to breathe. Pyrethrum is an effective remedy in many cases, but unfortunately is too expensive for most practical operations. Kerosene is here the standby, as arsenic is for insects which bite, but it must be diluted in some way. Kersene emulsion is the commonest way of doing this. One-half pound of soap is dissolved in a gallon of boiling water; while hot, two gallons of kerosene are added, and the mixture is churned until it thoroughly unites. For use, ten to twenty-five parts of water are added. Spraying pumps are now to be had which carry both water and kerosene, mixing them as they leave the bacteria which cause it are destroyed

the nozzle. To generate a poisonous gas carbon bisulfide is sometimes used, but this gas is so heavy that it settles and cannot be used | trees are thoroughly coated with it, but everywhere. When mixed with air it explodes. Hydrocyanic acid gas is the most effective one known, but it is so very dangerous to human life that its use is to be avoided whenever possible. It is to be hoped that a less poisonous gas which will at the same time be effective, may in time to spray, when to spray, what to spray for, be discovered.

All these substances are insecticides, and, practically speaking, are as useless preventive and must be not only thorough-All these substances are insecticides, against fungi as so much cold water. It should be distinctly understood that arsenic or kerosene will have no effect whatever in reducing apple scab or any other

fungous disease Fungi, the second class of enemies re ferred to, are really minute plants, which sponge their food as we do, i. e., they can not make use of food directly from the earth; they can only use it after some higher plant has prepared it for them. They are colorless and live for the most part hidden within the plant upon which they are found. Here, again, we might make two classes: Those which live upon the surface of the plant, and those which live within its tissues. Unfortunately very few live on the surface; if they did, if would be much easier to control them. The sovereign remedy for fungi is copper, but all forms of copper are not equally efficient; Paris green, for instance, is an arsenite of copper, yet has very little value as a fungicide. The most available form, considering expense and efficiency, is the sulfate of copper, often known as blue vitriol, but this, like arsenic, when used alone, is injurious to the foliage, and needs to be neutralized with lime. This addition of lime has another decided advantage, for it forms a compound which sticks to the leaves far better than the common sul-

GREEN'S FOUR BOOKS

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DEVOTED TO:

24. Peach Culture

fate alone would do. I presume the for-Results of Spraying. mula still most used for making Bordeaux

mixture is six pounds of copper sulfate

and four pounds of lime to about fifty gal-

lons of water. This is more lime than is

needed to neutralize the copper sulfate,

many purposes the proportion of copper

putting it in a coarse gunny sack and

merely put into the bottom of the barrel

and not stirred it will not all dissolve

Two pounds may be used to each gallor

of water in the barrel, the proportion of

copper sulfate will then be got by measur

ing out the solution. It is also convenient

to slake a quantity of lime at one time,

and then use as needed. This can be done

as follows: Dip enough copper sulfate so-

lution to make the required number of

pounds into a barrel, add some water, and

then put in the slaked lime. To tell when

enough lime has been added, get from the

drug store an ounce of potassium ferrocy-

anide, put this in a small bottle and pour

on enough water to dissolve it. When a

drop of this is added to the copper sulfate

solution it will at once turn to the color of

rusty iron, but when enough lime has been

added, the color, which in the bottle will

be light yellowish, will remain unchanged.

Add a little more lime after the test shows

enough, to make sure, because this will do

no harm; then fill up the barrel, and the Bordeaux mixture is ready. If biting in-

sects are to be fought at the same time,

add one-fourth pound of Paris green or

London purple or the proper amount of

Bordeaux mixture leaves a thick bluish

Bacterial diseases, the third class of

enemies with which the horticulturist

must fight, are the most difficult of all to

combat, because they are so generally out

of reach. In their nature they correspond

to the grip and typhoid fever which attack

the human race. These bacteria are in

some ways unlike either plants or animals.

In form many of them somewhat resemble

an ant's egg. Now, if you can imagine

that egg moving away from the eye until

longer seen except by the aid of a power-

ful lens, and realize that under favorable

conditions it will pull itself apart and

make two, each one of which will repeat

the operation, and that this process goes

diseased plant, and a crude idea of the na-

ture of bacteria may be obtained. They

not only absorb food in their growth, but

often develop poisonous products which

may work injury. The apple blight be-

longs to this class of enemies, and while

by Bordeaux mixture, it is practically im-

possible to get it where they are. Some-

times infection may be prevented when

unfortunately a great deal of the disease

enters through the blossoms in spring

and manifestly cannot be prevented in any

In summing up, let me again emphasize

done, but done before the injury ap-

pears.-Fred W. Card, Kingston, Rhode

Spraying in Massachusetts.

It is agreed by everybody now that

kinds of insects to be killed and fungou

disease to be fought that unless the far-

mer sprays his trees faithfully he has little

has made fruit growing so uncertain a

business that the farmers who follow the

old-time practice are generally pretty thor-

oughly discouraged. The only times when

can get nothing for it. Spraying with in-

this condition of things. Excepting un-

timely frosts or other weather peculiarities

that are beyond human power to remedy

spraying will make fruit growing as safe

a business as any kind of farming. It will

also be more profitable than fruit

growing has ever been before, for fruit

growing will then be possible only to those

who are able to give the increased care

and skill which it requires to make sure

of a crop. It should not be forgotten that

the first spraying should be done before

the buds have burst into leaf. That can

be made much stronger as to the fungi

cides than will be safe to use after the

young vegetation has put forth. This first

spraying will destroy spores that are on

the tree ready to attack the young leaves

so soon as they put forth. Even if fungi-

cide destroy the fungus, then it can only

be after the leaves have been more or less

injured. This injury should be prevented.

W. H. MAY, M.D.

-American Cultivator.

spraying apparatus is a necessary adjunct

every fruit farm. There are so many

the fact that the sprayer should know why

and what to spray with; then remen

such way.

Island.

on with great rapidity; then imagine th

t becomes so small that it can be no

white arsenic directed before.

potato flea-beetle.

sulfate may be reduced. It does no

Raspberries were a good crop excep reds. Loudon is valuable. Apples, pears and plums were light crops for 1898. A few who have sprayed systematically for years have been able to change the bearing of their trees so that they may get fruit every year. One man, Mr. F. A. Willis, of South Richland, who has sprayed six years, raised 250 barrels of apples from eight acres this year which sold for nearly \$800. Neighbors of his, who have not sprayed, get no fruit and are cutting down their trees.-L. I. Farmer, in W. N. Y. Horticultural Report.

Does Spraying Pay.

Prof. I. H. Bailey, of Cornell Experiment Station, in a recent bulletin, discusses the subject of spraying under this inquiry. The past season has given strange results in spraying. In very many instances spraying seemed to do no good. He then goes on to say:

"Does spraying pay, then? Certainly; the same as tilling and pruning do. We do not know why there were so many unsatisfactory experiences in 1898; but this does not lessen the fact that bugs and fungi should be killed. That spraying pays is as well demonstrated as it is that apple worms, tent caterpillars and potato blight are injurious. Markets often fail, but, it does not follow that markets are a nuisance. The safest way is to make it a rule to spray everything every year and then to break the rule when one is sure that the combination of circumstances is such that spraying is not necessary.

"This means that the fruit farmer mus master the reasons and the principles and then apply them as circumstances demand. As a rule, the better the results of spraying, the better has the operator conceived of his own local problems. If the fruit grower follows this advice, he will probably find himself spraying apples and pears and quinces every year, and he will be more than likely to do the same for plums. grapes and strawberries.

"In no one of the applications of science teaching to fruit growing has the American so clearly the advantage of the European as in the knowledge of insect and fungous pests and of means of dispatching them. The superiority of the American fruit as a general market product is due in considerable degree to spraying. The insecticides are of no value in fighting American, of all men, should be the last to ask if spraying pays."

New Light on Spraying.

At a recent farmers' convention Prof. Burrill, of the University of Illinois, gave to his hearers a piece of information that he said had not yet got into the books. It was relative to the first spraying of fruit and trees for fungous diseases. It has been believed that in the case of most of these pests the spores lived over on the twigs of the trees. It was advised to spray before the blossoms were open, for the purpose of killing these colonies of spores. Fruit raisers have been religiously carrying out instructions in this regard and the experiment stations have been sending out spraying calendars year by year in which the fruit raiser is advised to spray before the opening of the blossoms. But now it has een found that the theory of the spores living over on the twigs is erroneous. The spores live over on the leaves that fall to the ground and lie there still spring. With the first breath of spring these spores ripen sufficiently to float in the air, and as soon as the voung leaf heging find a lodgment there and begin their life work. It is therefore useless to spray at the earliest time indicated in most of our books on spraying. This discovery will add much to the comfort of the orchardist, for it will decrease his times of spraying. It also adds greatly to his hopes, for if the spores live over on the dead leaves the proper way to get rid of them is to destroy the leaves. This may be done by clean cultivation, plowing under the leaves that escape the burning.

Suggested by Cornell Experi-

Special recommendations: With resent knowledge of peach leaf-curl, the following may be suggested:

1st. Spray thoroughly with strong Bordeaux mixture just previous to the swelling of the buds, late in March, or very early in April seems desirable in this lati-

2d. Spray again with weaker Bordeaux as soon as the petals of the flower have over.

3d. Spray again with weak Bordeaux when the first leaves are just full grown, or at just about the time that the spores of the fungus are developing.

chance to harvest a crop. It is this that Discussions of recommendations: 1st. Why not spray in midwinter? Midwinter spraying may be quite effective, but there is every reason to believe that the they can get a crop are seasons when April spraying will be better; for if that is everybody has a glut of fruit, and they near the time that the buds are infected the spores will then be more readily killed. secticides and fungicides is the remedy for If a time when other work is not pressing is of first importance, spray earlier. Why not use copper sulfate solution? It may be quite as efficient, but Bordeaux adheres better and would be more likely to prevent

infections throughout a period. 2d. Why? Late infections by from the ground or from neighboring fields may thus be guarded against.

3d. This spraying is to cover the leaves with Bordeaux at about the time the fungus is fruiting, hoping not only to prevent summer infections, but to cover places where the spores may lodge in order to pass the winter.

THE BORDEAUX MIXTURE.

In making the first spraying, the allimportant one, strong Bordeaux mixture may be used; and every twig should be so well covered that the blue color appears as a distinct coating after the application has dried. However, under certain conditions, the foliage of the peach seems to be easily injured by spraying with Bordeaux mix-ture. With weak Bordeaux mixture properly made, I have not been able to produce any injury on the trees experimented upon The customary formula for Bordeaux

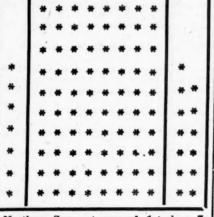
mixture is: Copper sulfate (blue vitriol). . 6 lbs. Unslaked lime (good quality). 4 lbs.

duce the copper sulfate to four pounds. If you suffer from Epilepsy, Fits, Spasms, Spells, Falling Sickness, St. Vitus's Dance, etc., Even this may seem strong. It should not, however, be condemned until tried; and when tried the mixture should be made by have children, relatives, friends or neighbors that do so, or know people that are afflicted my New Discovery, Epilepticide, will PER-MANENTLY CURE them, and all you are asked the one method which has been most successful. To dissolve the copper sulfate, suspend it in a coarse sack in a barrel conto do is to send for a FREE Bottle and try it. It has CURED thousands where everything taining 25 gallons of water. Slake the lime (use only the best) slowly, and then dilute it to twenty-five gallons. Pour the else failed. My 90-page Illustrated Book, "Epilepsy Permanently Cured." FREE. When two together in this dilute form, stirring for a few minutes. Stir before using. If writing, please give name. AGE and full address. large quantities of the mixture are desired, lence professionally confidential stock solutions may be made as usual. Dissolve say fifty pounds of the copper sulfate May Laboratory, . 94 Pine St., New York City.

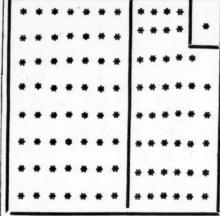
in a barrel containing as many gallons of water. The stock solution of lime may be made of the same strength. Then each gallon means a pound of the substance wanted. When the mixture is made, dilute each solution separately before pouring them together.

Eight Times as Many Good Apples When Sprayed.

The Ohio Experiment Station shows be low the effect of spraying apple trees. The left hand column of stars represents the 1st class fruit, the middle stars the 2d class, the left hand space the 3d class of culls. Notice that where not sprayed there were only 7 No. 1 apples, but where sprayed there were 56 first-class apples.



Northern Spy, not sprayed, 1st class, 7 2d class, 80; 3d class, 13.



Northern Spy, sprayed, 1st class, 56; 2d class, 43; 3d class, 1. These are actual percentages obtained

An Expert on Spraying.

"Spraying Experiments in 1898" was the subject of the valuable paper by William M. Orr, superintendent of spraying experiment for the Provincial Government. Sprayers were sent out by the Government to thirty different points to give fruit growers object lessons in spraying, and much of the paper was filled with letters from those whose orchards had been sprayed. The experiments were witnessed by 3,558 persons. Bordeaux mixture and Paris green were used. All reports were decidedly favorable, showing great difference in favor of the portions of the orchard sprayed. In an orchard of Snow or Fameuse apples the sprayed portion assorted 85 per cent. of fair fruit, while the unsprayed portion showed but 9 per cent. of fruit free from scab fungus. The leaves appearance, indicative of health. Good cultivation, abundance of manure and thorough timely spraying are necessary to produce good fruit.

Mr. Yeomans said arsenite of soda and arsenite of lime had both been used by them as a substitute for Paris green, and found cheaper and just as good. Mr. Orr had prevented peach leaf curl by early spraying before the leaves start. Where Mr. Yeomans sprayed twice before blossoming and twice after he had large crops of fruit, but where he sprayed but once before blossoming the crop was lighter. Spraying for Peach Leaf Curl Can kill canker worms every time by spraying early enough, while the worms are small, but when they are large you cannot get enough spray upon the leaves to kill them.

> Our English correspondent says that the Kieffer pears are sold in London for eating fresh as a dessert fruit, and those coming to hand in good condition are much sought. The Ben Davis apple is called a grand apple for sale there. Its fine appearance and good keeping qualities make it one of the best for the retail trade. He says that the shippers would do well to send only the best graded fruit, as it is only this which is sought, at good prices, Small and inferior fruit simply tends to disorganize markets and prices. Still any well-colored, large apples will always pay to send there. Now we know what to do with the Kieffer pear and Ben Davis apple. -Rural New Yorker.

About Spraying at the New York Agricultural Experiment Station.

Editor Green's Fruit Grower: No spraying calendar has been issued by this Station. In 1895 a bulletin was pub lished giving description of common diseases and insects injurious to fruits and vegetables with treatment for same. A portion of this bulletin is being revised nd somewhat enlarged. The recommendations for treating the fruit pests are modified in some instances as compared with the recommendations given in pulletin 86. The treatment to be advocated for peaches and apples is given beow-Yours sincerely, S. A. Beach. GENERAL TREATMENT FOR PEACH LEAF-CURL.

Spray in early spring before buds break ising Bordeaux mixture 1 to 11 formula. Some advocate copper sulphate at the rate of 1 lb. to from 15 to 20 gallons of water. The Bordeaux mixture seems preferable because it adheres better. GENERAL TREATMENT FOR APPLE ORCHARDS.

WHAT TO USE. TIME FOR APPLICATION. 1. Just before leaf-buds burst 2. Just as the leaf-buds show green tips, 1. e., a week Paris green.* Bordeaux Paris green.* Just before blossoms open i. e., about a week or ten days after 2.

4. Just after blossoms fall,

5. From ten to fourteen days after 4.

mixture. Paris green. Bordeaux mixture.**
Paris green,
Bordeaux mixture.

you of consumption and of all diseases

It is not a drug system, but a system

York, and mention reading this in Gree Fruit Grower, and the Four Free Pre rations will be forwarded you. The system is a positive cure for on sumption, that most insidious disease, ar

Thin, pale, weak people become fat an hearty by its use.

The test is to try it.

To be Cheerful.

The sovereign voluntary path to cheer fulness, if our spontaneous cheerfulness be lost, is to sit up cheerfully, to look round cheerfully, and to act and speak as if cheerfulness were already there. If such onduct doesn't make you soon feel cheer ful, nothing else on that occasion can. So to feel brave, to act as if we were brave, use all our will to that end, and a couragefit will very likely replace the fit of fear. Again, in order to feel kindly toward a person to whom we have been inimical, the only way is more or less deliberately to smile, to make sympathetic inquiries, and to force ourselves to say genial things. One hearty laugh together will bring enemie into a closer communication of heart than hours spent on both sides in inward wrestling with the mental demon of uncharitable feeling. To wrestle with a bad feeling only pins our attention on it, and keeps it still fastened in the mind, whereas if we act as if from some better feeling, the old bad feeling soon folds its tent like an Arab and silently steals away.-Professor James's "The Gospel of Relaxation," in Scribner's.

-The distance from the farthest point of olar discovery to the pole itself is four hundred and sixty miles -An inch of rain falling upon an area f one square mile is equivalent to nearly 17,500,000 pounds or 64,844 tons.

SPRAYING FRUIT TREES. The question of spraying fruit trees to prevent the depredations of insect pests and fungus diseases is no longer an experiment but a



INSECT OR DISEASE TO BE FOUGHT. ud-moth. Case-bearers. Case-bearers. Canker-worr Tent caterpillar and numerous other leaf

eating insects.

Apple scab, if trees are badly infested. Also the apple canker diseas the apple canker disease.

Canker worms, tent caterpillars, etc.

Apple scab. This is the most important treatment in fighting the scab. The application should be thoroughly made.

Codling moth. Canker worms. Tent caterpillars ato

pillars, etc.

Apple scab. A very important treatment. It should be made on time and thoroughly. Codling moth.

Apple scab. If cool, wet weather has prevailed this application should be made with especial thoroughness.

The Paris green should be used at the rate of 1 lb. to 150 gallons of water or Bordeaux mixture. If used without the Bordeaux mixture two or three pounds of freshly slaked lime should be added to prevent injury to the foliage. Other arsenicals may be used instead of the Paris green at strength equivalent to that above recommended.

*The Bordeaux mixture should be made by the 1 to 11 formulas, i. e., using one pound of copper sulphate to make eleven gallons of the mixture. Directions for making are given in bulletin 121 of the N. Y. Experiment Station, Geneva, N. Y.

Winter treatments are not advocated. They have been tested and it is found that they do not give enough increased benefit over the line of treatment above advocated to pay for the expenses of such treatment.

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An American Scientist's Great Work

Consumption, Pneumonia, La Grippe, Asthma, Catarrh Bronchitis and All Lung and Bronchial Troubles Can be Positively and Permanently Cured.

Dr. Slocum's System of Treatment Has Revolutionized Old-Time Theories.

A Free Course of Treatment for All Sufferers for the Mere Asking.



SCENE IN THE SLOCUM LABORATORIES, NEW YORK CITY

The Doctor Demonstrating to Medical Men, Scientists, Statesmen and Stud the Value of the New Slocum System of Treatment for the Permanent Cur of Lung Consumption, Catarrh and All Pulmonary and Wasting Diseases.

Do you cough? Do your lungs pain you? Is your throat sore and inflamed? Do you spit up phlegm? Does your head ache? Is your appetite bad? Are your lungs delicate? Are you losing flesh? Are you pale and thin?

Do you lack stamina? These symptoms are proof that you have in your body the seeds of the most dangerous malady that has ever devastated the earth-consumption. Consumption, the bane of those who have been brought up in the old-fashioned

beliefs that this disease was hereditary, that it was fatal, that none could recover who were once firmly clasped in its relentless grip. But now known to be curable, made so by the world-stirring discoveries of that man whose name has been given to this

new system of treatment. Now known to be preventable and curable by following and practicing his ygienic teachings. The new system of treatment will cure

which can be traced back to weak lungs as a foundation.

of germ destruction and body building Not guesswork, but science. Not a step backward, but a stride or of the old ruts. Made possible only by Pasteur's, Virch

ow's, Metchnikoff's and Slocum's lates discoveries in bacteriology, hygiene and therapeutics. In plain English, a system of moden

scientific disease curing.

The System consists of Four Prepare tions which act simultaneously and sup plement each other's curative action. You are invited to test what this system will do for you, if you are sick, by writing for a free treatment to the Slocum La oratories, New York City.

WRITE TO THE DOCTOR. Send your name and full express postoffice address to Dr. T. A. Slocus Laboratories, 96 and 98 Pine street, No

for all lung troubles and disorders comp cated by loss of flesh, Coughs, Catarri Asthma, Bronchitis, etc.

Especially Valuable in Dry

All farmers know the value of freque shallow cultivation in dry seasons, and a know that deep cultivation in a dry sp s the worst possible thing to do. Surface cultivation with the Weed creates a fine dust mulch, which prevents almost entirely, evaporation of moistu and the roots being undisturbed, supply the plants with plenty of moisture even in e cessive drouth. A trial will convince the most skeptica

of the truth of this statement.

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If you are the owner of only five or eve one or more cows the De La Val Separa tor Co. claims it would pay you hand somely. In their new catalogue on up-to date dairying they call attention to the creased quantity of cream, the saving it ice, the better quality of the butter, t double value of the skim milk, the gre saving in time of churning, time in hand ling, setting and skimming of milk, th saving of time in washing and caring fo utensils, and the drudgery of all this wo and come to what they consider "the evitable conclusion." We believe it wo pay you to send for this catalogue and i restigate for yourselves. Address the La Val Separator Co., 74 Cortlandt S New York City, and don't forget, please to mention when writing that you say their advertisement in Green's Fru Grower.

Free to Millions of Sufferers. To prove for yourself the prompt cural powers of this great discovery every reader to be sent by mail, prepaid, a free sample bot and with it a book telling more about Swal Root and containing some of the thousands of testimonial letters received from the same of the sa

fferers cured Please mention that you read this offer Breen's Fruit Grower, and send your addition Dr. Kilmer & Co., Binghamton, N. Y. If you are already convinced that Swa Root is what you need, you can get the reg fifty-cent and one-dollar sizes at the drug st or of medicine dealers. Make a note name, SWAMP-ROOT, Dr. Kilmer's Swam and remember it is prepare & Co., Binghamton, N. Y. red only by Dr. K

Rife Hydraulic Engines. The Automatic Positive Air Feed Hy

The Automatic Positive Air Feed Hy Engine, manufactured by the Rife Company, 126 Liberty Street, New York intended to perform the work require hydraulic engine perfectly. This engine successfully where the water which supplies cally two feet above the working valvins machine will elevate water thirty feevery foot of fall or head. The engine started, being automatically supplied with at each stroke, cannot waterlog, and frequents for years without stopping. Upon cation, mentioning Green's Fruit Grower, and catalogue describing this useful may will be forwarded.





They must upward Who would keep

OU HEALTH DEL

Out in the The little cares that from I lost them yesterday Among the winds at Among the lowing of the The rustling of the t

The foolish fears of wha The foolish fears of wha I cast them all away Mmong the clover-scente Among the new-mown Among the hushing of the Where drowsy popples Where ill thoughts die Out in the fields with

Hair Pla

A Turkish physician the British Medical Jou has been experimenting the transplanting of ha bald parts of the scalp. to show that there is the complete renewal hair by this means, al of time and patience accomplishment of the siderable, to say the lea Dr. Menahem Hodara ments in the case of removed part of his I quote the account: plan was to scarify the implant thereon ha other parts of the pa hairs used for the pur with scissors at each weeks after implantation ber of the hairs were for root, and in no long crop was produced."

Deep Brea

Maj.-Gen. Drayson, of has made a special st breathing, and is now colds, sore throat and o which he suffered as a clares food and liquid parison with air in the man may live for days he dies in a few minutes breathing in pure air, fifty deep inhalations usual number is about acea for the immediate mends for the latter m, to make sure of an advantage in some handkerchief over the the air as it passes t then forcing it through continued lack of pro blood becomes permane sue of the same charac

it, with the result of im -Presbyterian Banner. Fruit and Vegeta

That fruit is a most food cannot be denied, eases may be greatly largely composed of fri It is a fact, too, that the ple eat more meat than not engaged in manual not take must strong ou large number of the con owe their origin to the food which entails a gr gastric juices than the withstand. The cures grape occur for the mo who are accustomed to are really owing to the gans of digestion are give rest. Semi-starvation purpose almost as well whose work lies chiefly

Poisoning by Reas

and varied diet is most

health .- Medical Record

By this is meant th

general, of the elimin the skin, by prolonged longed heating and sud which many of our cold rheumatism arise. The alyzed for a time. W poisons that should be cause suffering. We do kidney, or something els the work stopped in the call. A child was once leaf to figure in a cert monial and died of arres of the retained poison. risk really serious amou from time to time. In the kitchens are full war keeper is often a victin matism in her shoulders change from the heat over tub, ironing-board, to a and cold sheets and "c sufficient cause,—especia night the cold increases, xposure of the shoulder A hearth fire is always of ter bedroom, and aids ventilation. But all suff rheumatism should secur irrespective of preceder place of sheets, a her shoulders, flannel under cotton night-dresses, a whatever at hand that se is imperatively needed, The New Voice.

Deep in Home T

Mr. Hufkins, of India ome one night last w book under his arm. "There, I reckon there loctors' bills in this fa he said. "When the K after this we'll do the diagnose the case oursel